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A Study of Communication Practices between Office and Field-Based Personnel in Home Healthcare Agencies

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A STUDY OF COMMUNICATION PRACTICES BETWEEN OFFICE AND FIELD-BASED PERSONNEL IN HOME HEALTHCARE AGENCIES

by

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The population of developed countries is rapidly aging. People want to age in their residence, and as they advance in years, most people will need assistance with activities of daily living and perhaps medical assistance to remain at home. Home health aides provide a large portion of such care. However, the annual turnover rate of home health aides exceeds 60% due to factors such as low wages, poor benefits, and a challenging work environment. Many studies have been conducted to elucidate the factors contributing to job satisfaction in the home health aide population, yet despite decades of research, turnover among home healthcare aides continues to escalate. Employers urgently need practical, low-cost strategies to maintain staffing levels.

An avenue of research not previously studied in the home health community is the effect of communication processes on intent to leave. The nursing profession faces similar turnover issues, and researchers have identified a set of communication processes inversely related to intent to leave. Variables from the National Home Health Aide Survey (NHHAS), analogous to those identified in nursing, were analyzed to determine their effect on intent to leave. Chi-squared analysis of the study sample showed that a smaller percentage of aides who intended to leave responded that they strongly agreed with the independent supervisor variables: my supervisor provides clear instructions when assigning work my supervisor is supportive of

progress in my career; my supervisor listens to me when I am worried about my patient's car; my supervisor values and appreciated the work I do as a home health aide very much; and, my supervisor respects me a great deal. The majority of aides in both groups, those not at all likely to leave their job and those very or somewhat likely to leave their job, indicated they had problems with agency staff and had received misinformation from the agency about a patient's health. Also, over 80% of aides in both groups indicated that they had problems with co-workers and supervisors. Also, most aides in both groups indicated that working with their co-workers or supervisors was not a reason to continue their current job.

Three logistic regression models, each with a different mix of variables, were developed. The regression analysis results indicated that in all three models, "My supervisor is supportive of progress in my career" was inversely correlated with intent to leave. The second significant variable in each regression was different for each question. In the base regression, "My supervisor listens to me when I am worried about my patient's care" was significantly inversely correlated with intent to leave. In the regression using the full set of supervisor variables," My supervisor appreciates and values my work" was significant, while in the full regression, the significant second variable was, "My organization values or appreciates my work." The implementation of supervisor training that increases positive interactions with aides may be an avenue to reduce turnover. Additionally, policy changes at the State and Federal level are needed to open home health aide career progression opportunities.

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Important to me in these interesting times in our history is an admonition from the prophet Micah:

Acknowledgements—Continued

He has told you, O man, what is good: and what does the LORD require of you but to do justice, and to love kindness, and to walk humbly with your God? Micah 6:8

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CHAPTER 1

BACKGROUND

Aging Population

The population of developed countries is rapidly expanding. In 2018 the U.S. population aged 65 and over was estimated to be 52 million, approximately 14% of the population. By 2050 those over 65 are projected to almost double to 83.7 million and be slightly over 20% of the total population (Mather, 2019). Approximately 70% of people turning age 65 can expect to use some form of long-term care during their lives. By 2050, the number of individuals using paid, long-term care services in any setting (e.g., at home, residential care such as assisted living, or skilled nursing facilities) is projected to increase from 13 million using services in 2000 to 27 million people (Friedland, 2015). In a study conducted by the American Association of Retired People (AARP), nearly 90% of seniors want to stay in their homes as they age. Even as they begin to need day-to-day assistance or on-going health care, most (82%) prefer to age in place (Faber, 2011). Home health aides provide essential services to elderly or disabled individuals who require assistance to remain living in their own homes. Without this support, most of these individuals would require institutionalization.

Long-term Caregivers - Supply and Demand

The Direct Care Workforce (DCW) is an overarching term to describe usually non-degreed individuals who provide hands-on patient care assistance. There are four commonly

recognized categories of DCW labor – Nursing Aides/Certified Nursing Assistants/State Registered Nurse Aides (N.A.s/CNAs); Home health aides (HHAs); Personal Care Assistants (PCAs) and Home Care Assistants (HCAs); and Hospice aides.

Nursing Aides/Certified Nursing Assistants/State Registered Nurse Aides (N.A.s/CNAs) may be known by various titles in different states. They usually provide direct patient care in hospitals, nursing homes, assisted-living facilities, hospitals, or long-term care hospital-based or community rehabilitation centers. Their duties include assisting with meals, bathing, dressing, medication administration, wound care, vital sign monitoring, etc. N.A.s/CNAs must have a high school diploma or a GED and be certified. CNAs must pass a competency exam to obtain certification at a community college or vocational or technical school.

Home health aides (HHAs) provide services similar to those of N.A.s/CNAs, but agency-employed home care aides are generally limited in the scope of the medical care they can provide. For example, they cannot administer medication, even something as simple as eye drops, care for wounds, change catheters, etc. A high school diploma is not usually required for this job. However, if an HHA works for a Medicare/Medicaid certified agency, they must receive 75 hours of formal training and pass a competency exam within four months of employment. Minimum HHA training requirements by State are found in Appendix II - Table 20. A medical professional, usually a nurse, must supervise HHAs (*Home Health Aide Training Requirements by State*, n.d.).

Training requirements for Personal Care Assistants (PCAs) and Home Care Assistants (HCAs) are not Federally mandated and vary by state (*Personal Care Aide Training Requirements, n.d.*) PCAs/HCAs provide unskilled care in the home environment. They may also sometimes assist disabled individuals outside the home. PCAs/HCAs can be supervised by

a manager who does not hold a medical or nursing degree. Their duties typically consist of assisting with activities of daily living (ADLs) such as dressing, bathing, shopping, light housekeeping, and transportation to appointments.

Most employers require Hospice Aides (HA) to have a high school diploma or GED certificate. While not all jobs require certification, a CNA license or state-tested nurse's aide (STNA) license may be necessary for some positions. The job of a Hospice CNA is similar to that of an HHA. Hospice aides assist with personal patient care, including bathing and mouth care, changing bedding, and dressing. Certified Hospice Aides may manage wound care and patient nutritional needs. Hospice Aides work under a medical professional's supervision, such as a nurse, and work in either the patient's home or in a hospice care facility. Definitions and job functions are essential to understanding labor statistics and the rationale for study sample selection.

By 2020 the direct care workforce will be the largest occupation in the United States. Using Bureau of Labor Statistics (BLS) estimates, the Paraprofessional Healthcare Institute (PHI) estimates that from 2016 to 2026, there would be 7.8 million direct care openings (*State Workgroups Confront the Direct Care Workforce Crisis*, n.d.). About 1.4 million openings will be created by industry growth. However, turnover accounts for the loss of 3.6 million workers who leave the labor force altogether and 2.8 million workers who will find jobs in other occupations that may or may not be health-related (Bryant, 2019).

In his book, "Who Will Care for Us," Osterman (2017) distinguishes CNAs and HHAs. He defines CNAs as aides who work primarily in nursing homes and HHAs as those who deliver care in patients' homes. By this definition, the HHA workforce also includes PCAs, HCAs, and H.A.s. Osterman estimated that in 2015 there were 2,199,893 paid HHAs and 1,288,819

NAs/CNAs. However, a significant amount of care is provided by unpaid labor, such as family and friends. Osterman estimates this resource to be 20,659,439 individuals, of which the majority (19,254,924) are children and spouses. By 2030, based on growth in the aging population, fewer people getting married as well as increasing divorce rates, smaller family size, and the wide geographical dispersion of family members (U.S. Census Bureau, 2018), the shortfall will be nearly 11 million family/friend caregivers who must be replaced by paid care workers or institutionalization. Therefore, according to Osterman, the gap in caregiver supply and demand is much greater than predicted by the BLS. This shortfall is further reflected in the decrease in the female HHAs who fill greater than 95% of the workforce. In a report to Congress in 2003, the U.S. Department of Health and Human Services (DHHS) concluded that between 2000 and 2050, the supply of women between the ages of 25 and 54, the workers who have traditionally worked in both paid and unpaid long-term care, will increase by only 9%, enough to fill only about 40% of the projected demand ("The Future Supply of Long Term Care Workers in Relation to the Aging Baby Boom Generation," 2003).

While demographic changes are critical drivers of the supply and demand gap for long-term direct care workers, workforce turnover is equally important. In a 2015 benchmarking survey of over 700 home care companies conducted by Home Care Pulse, the median turnover rate among HHAs was 61.6% (Ozga, 2015). Recently released top-line results from a 2019 update of this survey showed turnover has climbed to 82% (Holly, 2019). Osterman theorizes that turnover might represent HHAs moving in and out of the profession and moving from agency to agency in search of a better situation, which points to the importance of workplace conditions to employee retention.

This extremely high rate of turnover is costly to a business in several respects. Financially, the cost to replace each departing employee exceeds $4,200 due to recruitment, orientation, and training of new employees (McPherson, 2016). High turnover rates also result in lost productivity, reduced morale, and increased stress for the staff left behind as they try to fill the gaps in service while the company hires new employees (Wilhelm, Bryant, Sutton, and Stone, 2015). Finally, turnover compromises the continuity and quality of care for consumers and is disconcerting to patients and caregivers who often form strong personal bonds (SEIU Healthcare, 2012).

Predicting Home Health Aide Job Satisfaction and Intent to Leave

The need to better understand drivers of home health aide job satisfaction and turnover has inspired wide-ranging research. Many factors have been studied, such as compensation and intrinsic rewards, training, career advancement, worker characteristics including age and race, and workplace environment. These will be reviewed in Chapter 2. Despite decades of research into home health aides' job satisfaction and intent to leave, aides' turnover rate continues to increase. Clearly, new avenues of research that attempt to provide employers with the tools needed to retain staff are of critical importance.

Role of Communication in Intent to Leave

The nursing profession faces similar issues with nurse turnover. Researchers in the healthcare communication discipline have identified specific nurse-team communication variables that characterize the process by which individuals affiliate with supervisors, co-workers and their workplace. Apker's work (Apker, Propp, & Ford, 2009) defines such interactions as

communication processes. These processes, discussed in detail in Chapter 2, increase nurse attachment to their organization and patient care team and thus reduce intent to leave. The nurse supervisor's role is central to fostering the communication processes that care teams assess as providing support for them to choose not to leave their organization.

This research develops a conceptual link between Apker's communicative practices and workplace characteristics in HHA job satisfaction and intent to leave literature. Communication processes as a theoretical basis for investigating HHA's intent to leave have not been previously studied. Data for this quantitative research is derived from the National Home Health Aide Survey (NHHAS) conducted between September 2007 and April 2008. The NHHAS was sponsored by the Office of the Assistant Secretary for Planning and Evaluation (ASPE), the principal advisory group to the U.S. Secretary of the Department of Health and Human Services (DHHS). The NHHAS utilized an extensive questionnaire. For this study, 12 independent variables were selected that were deemed analogous to the communication processes derived by Apker et al. Additional support for the suitability of the independent variables as well as further confirmation of the positive effect of communication in reducing intent to leave in a health care setting is found in several more recent key nursing publications.

Study Purpose

The purpose of this study is to examine the effect of a specific set of communication processes on HHA job satisfaction and intent to leave their jobs. Ultimately, the study's goal is to provide home health care agencies with empirically derived organizational changes that could be cost-effectively implemented through training to reduce employee turnover.

The contribution of this research is two-fold. First, this study will introduce a research construct for examining the effect of communication in the HHA workforce. This work can stimulate a new avenue of investigation in HHA job satisfaction and intent to leave research. Secondly, from a practical standpoint, this study may identify simple, non-monetary strategies for increasing job satisfaction among home healthcare workers in an industry that faces growing competition for government healthcare funding and must rely on low/no-cost solutions to high employee turnover.

Research Importance

This research's importance is that if organizational communication factors can be identified that reduce intent to leave among HHAs, such information would provide home healthcare agencies with a tool to help stabilize staffing levels. Agencies would be able to develop appropriate processes and training to engage supervisors and HHAs in the creation of new communication norms that propagate the desired organizational behaviors. Such an approach could provide a low-cost option for home healthcare agencies to address worker turnover driven by dissatisfaction with organizational communication issues. To date, there has been no systematic examination of a communication construct in HHA intent to leave.

Research Questions

This research aims to address the following questions:

1. What is the effect of organizational communication variables on home healthcare aides' intention to leave their job in the coming year?

2. What supervisor variables affect whether a home healthcare aide intends to leave their job in the coming year?

Research Hypotheses

The research hypotheses are constructed to test the effect of various combinations of supervisor and organizational variables on the dependent variable "intent to leave." The dependent variable is expected to decrease as responses to independent variables (See Table 2 for the complete list of study variables and their definitions) are more affirmative. Aides who agree more strongly with the independent variable statements will be less likely to intend to leave their job in the coming year.

H1: There is a statistically significant inverse relationship between one or more Base Supervisor Communication Variables (SUPCLEAR; SUPADVAN; SUPHEAR; SUPTELLS; PROBSUB; NOWSUP) and a home health aide intending to leave their job in the coming year.

H2: There is a statistically significant inverse relationship between one or more Full Supervisor Communication Variables (SUPCLEAR; SUPADVAN; SUPHEAR; SUPTELLS; PROBSUB; NOWSUP; RESPECTS; SUPVALUE) and a home health aide intending to leave their job in the coming year.

H3: There is a statistically significant inverse relationship between one or more organizational communication variables and control variables (SUPCLEAR; SUPADVAN; SUPHEAR; SUPTESLLS; PROBSUP; NOWSUP; RESPECTS; SUPVALUE; NOWCWORK;

ORGVALUE; AGE; RACERCODE) and a home health aide's intent to leave their job in the coming year.

To examine the effect of communication process on HHA's intent to leave, data derived from the National Home Health Aide Survey (NHHAS) will be used. The study was sponsored by the Office of the Assistant Secretary for Planning and Evaluation (APSE) and conducted in partnership with the National Center for Health Statistics (NCHS). The NHHAS was conducted between September 2007 and April 2008 as a supplement to the National Home and Hospice Care Survey (NHHCS), a nationally representative survey of Medicare or Medicaid-certified state-licensed home health and hospice agencies (Bercovitx & National Center for Health Statistics, 2010). A total of 1,036 home care agencies completed the NHHCS. The NHHAS study utilized the same list of 1,036 agencies selected by the NHHCS and surveyed between one and six aides employed by each participating agency. The study recruited 3,377 home health workers, certified nursing assistants, hospice aides, and home care aides/personal care attendants who completed the survey conducted via a computer-assisted telephone interviewing system. The extensive survey questionnaire included questions about recruitment, training, job history, family life, management and supervision, client relations, organizational commitment, workplace environment, work-related injuries, demographics, and job satisfaction.

The NHHAS has been extensively analyzed and referenced since its completion in 2007. A search of the University Library database containing the term "National Home Health Aide Survey" provided a list of 96 references between 2007 and 2021. These results revealed thirteen published articles, one book chapter, and two dissertations that analyzed the NHHAS database alone or in combination with other data (Appendix 1). The Stone et al., 2017 publication is the most popular article with 29 citations to date. The remainder of the references included

presentation abstracts, association newsletter articles, or newspaper articles reporting on the study or studies carried out with the data or were published research articles that referenced the NHHAS research. Despite being conducted over a dozen years ago, the NHHAS data continues to provide the healthcare research community with the ability to understand more about HHA demographics, attitudes about their jobs, workplace characteristics, and motivations for entering and leaving the profession.

The research in this dissertation will use the NHHAS data to explore a set of variables related to communication processes between organizations, workplace supervisors, and home health aides to understand these variables' effect on HHA intent to leave.

Summary

This chapter has laid out the problem, namely the need to stabilize and increase the supply of the home health aide resource to meet the care needs of the rapidly aging population who wish to receive care in their homes. Although there has been significant research in this area, turnover continues to increase among home health aides. A strategy frequently mentioned for improving employee retention is increasing compensation and benefits. However, competition for Medicare and Medicaid dollars, the primary source of funding for home care agencies, is becoming more intense. Increases in CMS funding are not keeping pace with the rise in the demand for home care services due to a rapidly aging population and are not adequate to provide substantive financial incentives to home health aides. Therefore, other strategies for improving job satisfaction and decreasing turnover are required. A promising avenue of research is the positive effect of improved communication between healthcare organizations and

supervisory personnel and their teams. This study will seek to extend this research to the home healthcare environment.

Chapter 2 will present a review of current research on home health aide intent to leave literature and pertinent health care communication literature. Chapter 3 will describe the methodology, research design, and procedures for this investigation. Chapter 4 will detail how the data were analyzed and provide both a written and graphic summary of the results. Chapter 5 is an interpretation and discussion of the results and the study implications for home health agencies and policymakers.

CHAPTER 2

LITERATURE REVIEW

Introduction

The purpose of Chapter 2 is to provide a background in the HHA job satisfaction and intent to leave literature and factors that influence HHA intent to leave. Gaps in the literature will be identified, which will provide the rationale for studying the effect of organizational communication processes on intent to leave in the HHA population.

First, literature that links job satisfaction, intent to leave, and actual turnover is reviewed. The importance of the finding that intent to leave predicts actual turnover makes possible non-longitudinal studies examining factors affecting home health aides staying or leaving their jobs. A study significant to home health aide job satisfaction and intent to leave literature is the National Home Health Aide Study (NHHAS), discussed in detail in this chapter. The NHHAS provides the theoretical basis for the research in this dissertation. Additionally, a literature survey that has corroborated NHHAS findings and/or identified other factors found to influence home health aide intent to leave is provided. Next, healthcare communication literature in the nursing profession, which demonstrates the link between the communication process and intent to leave, is reviewed and provides the rationale for studying communication processes and intent to leave in the home health aide population. Finally, additional literature in the nursing and nurses' aide populations that established the relationship between communication and intent to leave in the direct care workforce is reviewed.

Job Satisfaction, Intent to Leave, and Actual Turnover

When interpreting HHA job satisfaction studies, it is essential to understand the distinction between job satisfaction, intent to leave, and actual turnover and how these factors interact. In simple terms, job satisfaction is defined as a "positive or negative evaluation one makes about one's job situation." (Weis and Merlo, 2015). Intent to leave results from an employee making a negative evaluation of their job and deciding to leave their current job. The time horizon typically associated with intent to leave and turnover in the literature is usually one year or less. From a practical standpoint, job satisfaction and an employee's intent to leave are nebulous and not as observable to business owners, particularly in an environment where employees spend most of their time working remotely at clients' homes. Turnover is the point at which an employee quits their job. For employers, turnover is a concrete, measurable metric and a business-critical factor that impacts their ability to provide quality care for clients and develop business growth strategies

Job satisfaction research is anchored in theories developed by Martin Fishbein and Icek Ajzen. Martin Fishbein was a Distinguished Professor of Communication and Director of the Health Communication Program in the Public Policy Center of the Annenberg School for Communication at the University of Pennsylvania. Icek Ajzen is a social psychologist and professor emeritus at the University of Massachusetts Amherst and was one of the most influential individual scientists within social psychology. His research has influenced advertising, health psychology, and environmental psychology and has been cited over 200,000 times. Fishbein postulated the connection between beliefs and attitudes and created the Expectancy-Value model of attitude formation which theorized that attitudes are developed and modified based on assessments about beliefs and values (Fishbein, 1967). This insight led

Fishbein and Ajzen (1975) to conceptualize the Reasoned Action model that describes the link between beliefs, attitudes, intentions, and ultimately behavior. An attitude toward an object or situation is created based on beliefs about that object or situation and, in turn, yields intentions and, ultimately, a behavior about the object or situation. Ajzen continued to build on this work and developed a framework for understanding the determinants of beliefs, attitudes, intentions, and behaviors, which he called the Theory of Planned Behavior (TPB) (Ajzen, 1985). The TPB states that behavior depends on both motivation (intention) and ability (behavioral control). It distinguishes between three types of beliefs - behavioral, normative, and control and is comprised of six components that together represent a person's actual control over their behavior: attitudes and the degree to which a person has a favorable or unfavorable evaluation of the behavior of interest, and considers the outcomes of performing the behavior; behavioral intention which includes the motivational factors that influence a given behavior – the more substantial the intention to perform the behavior, the more likely the behavior will occur; subjective norms which is the person's belief about whether peers and people who are important to the person think he or she should engage in the behavior; social norms of the cultural context in which the person lives; perceived power or the perceived presence of factors that may facilitate or impede performance of a behavior; and perceived behavioral control which refers to the person's perception of the ease or difficulty of performing the behavior of interest. This research forms the basis of most if not all job satisfaction research in a variety of disciplines.

Multiple studies have been conducted that provide empirical support for intent to leave as a predictor of actual turnover (Farrell, 1983; Kellough & Osuna, 1985; Kraut, 1975; Mobley, Horner, & Hollingsworth, 1978; Prestholdt, Lane, & Matthews, 1987; Murrells, Robinson &

Griffiths, 2008; Rusbult & Lowrey; 1985; Steel & Ovalle, 1984; Tett & Meyer, 1993; Vincent & Marno, 2018, and Withey & Cooper, 1989). Three of these studies are reviewed below.

Kraut (1975) carried out a longitudinal study among IBM salesmen to examine factors that were thought to affect attitudes about work at IBM and intent to leave and then measured actual turnover. A questionnaire was administered by mail. A total of 911 men responded for an 80% response rate. The questionnaire included topics about the work the salesmen performed, the company, teamwork, advancement, pay, and workload. Turnover was classified as short-term,18 months or long-term, 5 ½ years. After 18 months, turnover for respondents who indicated that they intended to remain at the company ("Certainly" remain) was 9% versus 30% of those whose responses were least committed ("Not sure or Not"). After 5 ½ years, 19% of those who "certainly" intended to remain had left the company compared with 35% of the least committed salesmen. An analysis of attitudes showed that expressed intent was a better predictor of turnover than attitudes and feelings about the work itself and the company as a place to work.

Vincent and Marno (2018) examined the role of a social justice orientation and organizational commitment on job satisfaction and intention to leave non-profit agencies. The sample for this study was drawn from New York City settlement houses organizations. The Settlement House Movement began in the late 1800s in response to large numbers of immigrants arriving in cities such as New York who were experiencing economic distress due to struggles with a new language and customs, unemployment, or low wages and unfair labor practices. The movement encouraged wealthy families to move to poor urban areas to provide support and serve as an example to new immigrants. Modern settlement houses primarily provide services that assist immigrants eligible to become citizens by providing English as a Second Language

programs, civics lessons, help with applying for citizenship, and organizing communities to advocate for their needs (UnidosUS, 2015). Data were collected from October to December 2015 via an online questionnaire using Qualtrics. An email with a request to provide contact information for agency middle managers was sent to the Executive Directors of 38 agencies who were members of the United Neighborhood Houses (UNH) of New Your City. Collectively the agencies employ more than 10,000 people and provide services at more than 600 sites across New York City. This outreach resulted in 107 participants in the study. The survey included 48 questions from established scales that assessed the respondent's social justice orientation (Torres-Harding, Siers, & Olson, 2011), job satisfaction (Weiss, Dawis & England, 1967), and organizational commitment and intent to leave (Blau, 1988). The survey also included six demographic questions. The dependent variable analyzed was intention to stay. The independent variable was social justice orientation as measured by the 24-point questionnaire developed by Torres-Harding et al. (2012). Approximately 80% of the survey participants were female and had a mean age of 40.6 years. About half were white, a quarter Hispanic, and ten percent Black or African American. The study found a significant relationship between social justice orientation and organizational commitment and between social justice orientation and job satisfaction. Also, there was a strong positive correlation between organizational commitment and job satisfaction and a moderate to strong positive correlation between organizational commitment and intention to stay. The study also found that social justice orientation indirectly and positively affected job satisfaction and intent to leave via its effect on organizational commitment.

A longitudinal study by Murrells, Robinson, and Griffiths (2008) was designed to test the validity of the Theory of Planned Behavior (TPB); that is, attitudes only indirectly affect

retention, whereas intentions directly affect staying or leaving. The study population consisted of newly graduated nurses in the U.K. in 1997. The total number of individuals eligible to participate was 3,669, and 3,213 were successfully recruited. The researchers formulated three hypotheses: (1) self-reported job satisfaction predicts intentions expressed about working as a U.K. nurse; (2) Self-reported job satisfaction at earlier time points (6 months and 18 months) predicts working as a U.K. nurse at 18 months and three years after qualifications; and (3) Intentions expressed at earlier timepoints predict working as a U.K. nurse at 18 months and three years. The rationale for these hypotheses was that if only 1 and 3 are satisfied, self-reported job satisfaction only indirectly affects working as a U.K. nurse and therefore supports TPB. If 1, 2, and 3 are satisfied, self-reported job satisfaction directly and indirectly (mediated through intentions) affects working as a nurse and only partially supports TPB. A secondary hypothesis stated that prior intentions predict intentions expressed at subsequent timepoints. A mailed questionnaire with factors about job satisfaction, including client care, staffing, development, relationships, education, work-life balance, and resources, was used to collect data. Rigorous follow-up procedures resulted in high response rates: at recruitment, there was a response rate of 76%, at six months, 64%, at 18 months, 53%, and at three years, 45%. The study results showed that the nurses' intentions are stronger predictors of working as a nurse than is job satisfaction, thus supporting Hypotheses 1 and 3. The data only partially supported Hypothesis 2. The association between job satisfaction and turnover was significant at 18 months but not at three years. The data also supported the secondary hypothesis. Intentions at six months did predict intentions expressed 18 months and three years. This study's results are consistent with the general body of literature demonstrating that intent to leave is a better predictor of turnover than job satisfaction measures.

Home Health Aide Job Satisfaction, Intent to Leave and Turnover

A vast body of scholarship exists that attempts to define important factors contributing to job satisfaction and intent to leave in the HHA population. The National Home Health Aide Survey (NHHAS) provides a valuable dataset for this analysis as it is the only nationally representative database in existence that describes home healthcare worker attributes and attitudes. The NHHAS study was sponsored by the Office of the Assistant Secretary for Planning and Evaluation (APSE) and conducted in partnership with the National Center for Health Statistics (NCHS). The NHHAS was conducted between September 2007 and April 2008 as a supplement to the National Home and Hospice Care Survey (NHHCS), a nationally representative survey of Medicare and/or Medicaid-certified state-licensed home health and hospice agencies (Bercovitx et al., 2010).

A total of 1,036 home care agencies completed the NHHCS. The NHHAS study used the same list of agencies selected by the NHHCS and surveyed between one and six aides employed by each of the participating agencies. The study recruited 3,377 home health workers, certified nursing assistants, hospice aides, and home care aides/personal care attendants who completed the survey conducted via a computer-assisted telephone interviewing system. The study's conceptual framework adapted prior research from various resources to arrive at a hypothesized model of social, cultural, economic, and political factors influencing job satisfaction (Wilhelm, Bryant, Sutton & Stone, 2015). The extensive questionnaire included questions about recruitment, training, job history, family life, management and supervision, client relations, organizational commitment, workplace environment, work-related injuries, demographics, and job satisfaction ("NHHCS – National Home Health Aide Survey," 2019). This rich data set has

been extensively analyzed to understand better factors that explain worker job satisfaction and intent to leave their job.

The Job Demands-Control-Support model, also known as the job strain model, seeks to define the relationship between work and health. It identifies two aspects of the work environment – job demands and job control (Karasek, 1979). A social dimension was added to the model by Johnson and Hall (1988) and Johnson, Hall, and Theorell (1989). Wilhelm et al. (2015) adapted this model to study HHA job satisfaction using the NHHAS dataset. The model includes multiple dimensions that theoretically can influence the job satisfaction of home healthcare aides. These include job stressors and demands (workload and satisfaction with workload and injuries); compensation (wages, benefits, and availability of a career ladder/promotions); worker characteristics (age, gender, race, education, household income, training, and job tenure); home care structure and policies (the type of agency, size, profit status, chain-affiliation, location) economic and sociopolitical factors (alternative job opportunities) and perceived workplace characteristics (supervisory relationship, empowerment, involvement in challenging work, respect from patients, supervisors, and agency, contingent assignments and training).

This research will use the Wilhelm model as the theoretical basis for the analysis to empirically seek to further refine aspects of the perceived workplace characteristics dimension. This will be accomplished by collectively analyzing those NHHAS variables that describe organizational and supervisory communication factors listed in Table 2 to develop a model for intent to leave based on these variables.

Wilhelm et al. presented his model and analysis of the NHHAS dataset in a report to the U.S. Department of Health and Human Services, Assistant Secretary for Planning and

Evaluation, Office Disability, Aging, and Long-Term Care Policy, in 2015. In 2017, this analysis was published by Stone et al. She and her colleagues found that job satisfaction is strongly inversely correlated with intent to leave the job. Factors that increased intent to leave included: work-related injury; part-time work and wanting more hours; race - Black/African American aides were more than twice as likely to leave their jobs than White only aides; aides working in for-profit, chain-owned agencies were more than twice as likely to intend to leave their job than aides employed by non-profit agencies; workers with a high household income were more likely to intend to leave their jobs than aides from lower-income homes, and aides below the age of 30 were more likely to intend to leave. Working part-time and wanting fewer hours or working full-time and wanting more hours decreases the intent to leave the job, as did having health insurance and consistent patient assignments. Stone also found that workers' job satisfaction earning a salary between 100% and 299% of the Federal Poverty Level and had benefits was negatively correlated with intent to leave. However, the job satisfaction of workers desiring more hours or working part-time was positively correlated to intent to leave.

Of interest to this research are perceived workplace characteristics related to HHA/supervisor and co-worker relationships, empowerment, respect, and training. The NHHAS survey encapsulated these properties in the following questions: did supervisors provide clear instructions when assigning work; were supervisors supportive of an HHA's training and career progression; did supervisors listen to the HHAs concerns about a patient's care; did supervisors respect and value the HHA; did supervisors communicate that an HHA did a good job; did the HHA enjoy working with their supervisor and other members of the care team; did the HHA experience communication problems with agency staff or receive misinformation about a patient's health; and, did the HHA experience difficulties with their co-workers or supervisor.

Wilhem et al. (2015) found that the odds of HHAs being satisfied with their job were significantly associated with feeling respected by the supervisor, being valued by the organization, and feeling empowered.

An essential consideration for interpreting the NHHAS data is the nature of the sample analyzed. The NHHAS questionnaire provided survey respondents with four options for describing where they worked: one in-patient facility, two or more in-patient facilities, both home and in-patient facilities, patient homes only, and both home and in-patient facilities. Therefore, the NHHAS sample included not only aides who delivered care in a patient's home but also aides who worked either full or part-time at in-patient facilities such as nursing homes or hospice centers. Of the 3,377 individuals in the sample, 986, or 29%, worked exclusively in a patient's home. The work environment is much different for aides who are employed full or part-time at an in-patient facility versus those who work remotely and have little direct contact with colleagues or supervisors. Therefore, the results of the NHHAS may or may not accurately describe factors that affect individuals who work in the field at a patient's home. Hence, in the present research, only those who delivered care in a patient's home are included in the analyses. The current research is the only analysis of the NHHAS database to focus exclusively on individuals who only deliver care in patients' homes.

Many subsequent analyses of the NHHAS have sought to clarify and expand understanding of HHA job satisfaction. Some of these are presented below. However, from a practical standpoint, employers and supervisors may not be able to address many of the influences shaping HHA turnover, such as the stress an employee faces who wants or needs more hours if client load does not support more than part-time work; higher compensation, which may not be financially viable; worker characteristics; agency structure or policies, especially in chain-

affiliated agencies; or general economic conditions. However, in general, workplace characteristics related to supervisor/employee and peer communication, and mentoring and training are under the employer's control.

Compensation

Increased compensation is the most widely studied and proposed strategy to decrease HHA turnover. According to data published by the BLS (*Home Health and Personal Care Aides*, n.d.), the mean hourly wage in 2018 for an HHA was $12.18, which equates to an annual wage of $25,330 for an individual working full time. However, because over 60% of HHAs work part-time, their median annual income is approximately $13,300. About 24 percent of HHAs live in households below the federal poverty line (*U.S. Home Care Workers: Key Facts (2019)*, n.d.). Over a quarter of HHAs do not have health care coverage, and one-third of HHAs rely on Medicare or Medicaid as the cost of purchasing healthcare insurance is too high. Most home care agencies do not offer retirement savings plans or paid time off.

Multiple studies have shown that compensation and benefits are important to HHA retention. Howes (2008) conducted a longitudinal study over 52 months examining the impact on home care worker retention of wage and benefits increases for HHAs in San Francisco. Howes defined retention as a new worker remaining in their job for one year after hire. Between 1996 and 2002, labor-led initiatives including unionization, the development of a consumer-labor coalition, and a campaign to establish a living wage ordinance, the average wage for an HHA nearly doubled to $10.00 per hour. In 2000, these workers' health care benefits were mandated by the Living Wage Ordinance ratification. Howes analyzed data from the Case Management Information and Payrolling System (CMIPS). This large and complex database tracks

information about all home care recipients and providers in California. Each county in California submits information to the CMIPS about the demographics and hours of service provided by caregivers and detailed information about the recipients of this care. Howes found that over the approximately four years studied, the annual retention rate for all HHAs rose by 9% and for newly hired HHAs by 89%. He calculated that a $1 per hour increase in wages above the national average (at the time $8 per hour) would increase retention by an additional 17%. Howes also estimated that adding health insurance increased the probability of retaining a new HHA from 61% to 82%.

Compensation versus Intrinsic Rewards

In a 2013 study of frontline health care workers, Morgan et al. studied the link between intent to stay and intrinsic versus extrinsic rewards. Frontline healthcare workers were defined very broadly as nursing assistants, respiratory therapy technicians, social and human service assistants, home health aides, mental health counselors, and medical transcriptionists. Further, these jobs were categorized as those that provide a high level of patient care or support services, have a low threshold to entry (generally a high school or a small amount of additional training: and generally earn $40,000/year or less. About 79% of these workers are female, and 32% are African American, Hispanic, or Asian (Price-Glynn and Rakovski, 2012; Schindel, Solomon & Santimauro, 2006). Examples of measures of intrinsic rewards included input into job tasks; you are given the chance to do the things you do best; you can see the results of your work; it is basically my own responsibility to decide how my job gets done; I have a lot to say about what happens on my job; I generally have opportunities for creative input and innovation in my work; meaning of job tasks (we treat clients like family, my clients give me a reason to return to work

each day, we care about the job we do, I know what my clients want and need); supervisor support of career development (my supervisor helps me identify career opportunities advocates for me for wage increases or promotions; helps me identify educational opportunities; teaches me new skills through examples at work, creates a learning environment at work); supervisor support of job tasks (my supervisor teats me as an equal member of the health care team; listens carefully to my observations and opinions; gives me credit for my contributions; respects my ability to observe and report; lets me know how helpful my observations are trusts me to do a good job; helps me with job tasks when help is needed); and co-worker support. Extrinsic rewards are defined as financial rewards. Intrinsic job qualities, as defined above, were a significant predictor of job satisfaction. However, intent to stay was primarily related to extrinsic job characteristics (pay, job security, fringe benefits). In this study, the correlation between job satisfaction and intent to stay was low. The sample of workers was relatively satisfied with their jobs and how they were structured, but whether they intended to leave was primarily related to the financial aspects of their job and what they wanted or needed in terms of compensation and benefits. These studies suggest that improving wages and benefits would decrease turnover among home health aides. However, many employers cannot appreciably increase their cost of labor.

Government policies meant to help can often only make matters worse for low-wage workers. The Obama Administration extended the Fair Labor Standards Act to provide minimum wage and overtime protections to direct care workers, including home health aides (U.S. Department of Labor, 2009). Employers are required to pay their employees a minimum wage of $7.25 per hour and time and a half for work exceeding 40 hours per week. However, there was no corresponding increase in Medicare and Medicaid reimbursement to accommodate

the new labor standards. The response of home care agencies was to cut the total number of hours aides worked and decrease total take-home pay. A supervisor at a large agency described how the new law affected her aides:

> Nobody gets overtime anymore. So, the people you are trying to help by raising the minimum wage, you end up destroying their overtime. We still have about 10 percent overtime, but before it was a lot, it was 50 to 60 percent because it didn't cost. So, what I actually had to do was to tell the aides, "We want you to work here, but if you need to get more hours, you have to go to another agency." So, you've got aides working two, sometimes three agencies to get the hours, but they're not getting the overtime. (Scott, 2020).

Homecare agencies rely primarily on government reimbursement as a revenue stream. Consequently, they face limitations on their ability to increase wages for current staff and grow their business. Medicare supports long-term care either at home or in an institution but for only a limited amount of time. Medicaid, which is only available to individuals who have exhausted their available financial resources, pays most long-term care expenses. Raeves and Musumeci (2015) estimated that 51% of all Medicaid spending goes to long-term support services (LTSS). However, Medicaid requires states to prioritize institutional LTSS, and therefore home care providers are left to compete with one another for funding. The Affordable Care Act's implementation resulted in states expanding Medicaid eligibility to people whose income was below a certain threshold. By 2018, 70 million people were enrolled in Medicaid (*Medicaid covered share U.S. 1990-2019*, n.d.). Another significant issue that the home healthcare industry must cope with are anticipated changes to the Medicare home health prospective payment system and the implementation of required home health quality measures and other related rules. The current prospective payment system (PPS) provides a payment to the home health agency on a per-patient basis that is trended for inflation and is adjusted based on factors such as area wage costs, patient care needs, and the location of the provider – whether rural or urban. However, as

part of the Balanced Budget Act of 2018, Congress mandated that the Centers for Medicare and Medicaid Services (CMS) make significant changes to the PPS system, intending to lower home health care costs. These changes began to roll out in 2020. The most significant change between 2020 and 2021 is the phasing out of upfront payments to home care agencies known as RAPS. These payments allow providers to receive up to 60% of reimbursements before any care is even delivered.

Discontinuation of these upfront payments will likely force many small agencies to exit the industry (Holly, 2020). Large senior living corporations are viewing these changes as an opportunity to acquire home health agencies. Many providers will be unable to adapt to the new rules quickly and will not be able to absorb the projected reductions in payments from Medicare. Amedisys, a large provider of home health, hospice, and personal care, estimates that about one-third of home health agencies (the "mom and pops") will end up underwater financially and be good acquisition targets (Holly 2019). Holly (2020) underscores his forecast with an example. The founder of a large, well-known family-owned and profitable agency in Louisiana, Egan Home Health, chose to sell to a large holding group rather than passing the business on to heirs because of the effort and expense required to adjust to new CMS regulations. However, the home health industry's attractiveness as a potential profit center within a larger senior care business is far from clear as managed care has placed further pressure on home health margins.

The Covid-19 pandemic of 2020-21 has shifted perceptions about institutionalized long-term care's attractiveness due to the high mortality rates from coronavirus of elders in nursing homes. There are increasing calls for reform in the long-term care industry. Also, many employers' shift to remote work is allowing an increasing number of families to care for their aging loved ones at home. This will be discussed in more detail in Chapter 5. However, it is

difficult to imagine a large enough increase in home health aide wages and benefits to, in the short term, close the gap between the supply of and demand for HHAs. Therefore, other lower or no-cost factors to improve job satisfaction among HHAs must be examined as potential levers to increase retention.

Training and Career Advancement

In an analysis of the NHHAS and a related study among CNAs, the National Nursing Assistant Survey, Sengupta, Ejaz, and Harris-Kojetin (2012) examined the similarities and differences between CNAs and HHA's perception of the value of training. CNAs and HHAs were primarily women, with half in each group White and one-third Black. However, the groups differed in age, with HHAs being on average seven years older than CNAs. Interestingly a greater percentage of HHAs, 40%, compared to 30% of CNAs, had some college education. More than 80% of HHAs and all CNAs received initial training as part of the hiring process. However, these two groups assessed the value of the training quite differently. Significantly more HHAs than CNAs believed that their initial training had prepared them very well for their job. CNAs were more likely than HHAs to assess their training as "excellent" in helping them navigate their patient's limitations in activities of daily living. Both groups received continuous education, and about the same percentage in each group indicated that such training was "very useful." In general, both HHAs and CNAs were satisfied with their initial training and continuing education. However, the authors made several recommendations regarding future training efforts. Not all HHAs received initial training, which is a potential issue given the projected growth in the need for home care. Additionally, both groups would likely benefit from a greater emphasis on hands-on training versus classroom instruction. Finally, while the study provided a

reasonable basis for understanding direct care workers' perspectives about the training they received, it did not address whether the training resulted in improved patient care or increased job satisfaction and decreased intent to leave their jobs.

Benijamali, Jacoby, and Hagopian (2014) surveyed 401 former home healthcare workers who voluntarily left their positions in Washington State. The top reason the study participants gave for leaving the home care profession was the desire to go back to school to gain skills that would allow them to find a better job with better hours and better wages and benefits. Interestingly, the demographics of the "leavers" sample in this study were somewhat different from those in the workforce. Leavers had a lower percentage of minorities, were more educated (27% had a college degree) and wealthier (one in four had a household income greater than $55,000) and were less likely than stayers to be the primary wage earner in their family.

Feldman, Ryvicker, Evans, and Barron (2019) examined the effect of improved training and support on job satisfaction and retention among home health aides enrolled in the "Home Care Aide Workforce Initiative" (HAWI) at three New York agencies. HAWI is a grant-funded program that provides training and mentoring for home health workers. The study looked at a sample of 228 home health aides who completed the training and were still on the job after three months. Three months after hire, 91% of HAWI aides reported they were "very satisfied" or "satisfied" with the job, and 57% reported that they were not at all likely to leave their job in the coming year." At 365 days, 60% were still working, and the authors predicted through their analysis that the odds of home health care workers remaining in their jobs at 3, 6, and 12 months after starting work were significantly higher among HAWI graduates than non-HAWI employees.

The link between career advancement, job satisfaction, and intent to leave in the home health aide profession has not been empirically demonstrated. There are references in the general allied health literature, for example, Frogner and Skillman (2016), stating that a career ladder can improve job satisfaction and reduce turnover. Still, no studies are referenced to support this notion. However, the desire for training among HHAs is a prominent theme in the literature, as discussed above. The motivation supposed by Stone and Bryant (2019) and Osterman (2017) for more training is the HHAs desire for job enrichment, which encompasses a greater sense of control over their job, a higher level of responsibility, and a felt need to be included more in the decisions regarding the care of their patients. Both Stone and Osterman argue that greater organizational support, mentoring of aides, and better training opportunities would enhance the value of an aide to the greater healthcare system and consequently result in improved job rewards, which would decrease turnover.

Worker Characteristics

Age

The age of HHAs may determine an individual's job satisfaction or intent to leave their job. Most studies have found that older workers have longer job tenure than their younger peers and conclude that older workers are more satisfied with their jobs. However, this conclusion may not necessarily always be the case. As Butler, Brennan-Ing, & Wardmasky (2014) pointed out, lack of other employment options due to age, physical limitations, or geographic location can result in longer job tenure for older workers. In an analysis of data collected from 1,614 Los Angeles home care workers on the state payroll in 2003, Delp, Wallace, Geiger-Brown & Muntaner (2010) found that older workers were significantly more likely to be very satisfied

with their jobs, although the age of aides in the analysis was not clear. The mean age for the sample was 51.9 years, with a standard deviation of 13.5. Using the NHHAS database, Stone, Wilhelm, Bishop, Bryant, Hermer & Squillace (2017) found that aides below the age of 30 had a higher intention to leave their jobs than older workers. However, if the job satisfaction variable was included in the logistic regression model, the difference disappeared. This result could be interpreted as younger aids mainly being satisfied with their current job, but for other reasons such as furthering their education and job advancement are looking for a new opportunity.

Butler et al. (2012) carried out a mixed-methods (survey and focus groups) study of 261 home care aides who, over 18 months, filled out two surveys and participated in one telephone interview. She found that aides with longer tenure were not as concerned with low wages and inconsistent hours as aides who left their jobs within a year. However, aides with longer tenure were older, lived rurally, had lower physical functioning, and their jobs were not their sole means of financial support. These factors seem to indicate that lack of other options, being "settled" in one's role and geographic location, and having other financial means mitigated the effect of variable hours and poor wages. Analysis of the NHHAS by Stone et al. (2017) also found that younger aides were more likely to intend to leave than older aides.

Race

Weng and Landes (2017) used data from the NHHAS to understand the influence of race and ethnicity in intent to leave. Their analysis of the NHHAS-defined race-ethic groupings as non-Hispanic Whites, non-Hispanic Blacks, Hispanics, and non-Hispanic Others. In addition to analyzing all-cause turnover, they utilized data for cause-specific turnover intent. All-cause intent to leave among non-Hispanic White HHAs was 30%. For non-Hispanic Blacks, this

number was 42.3%, among non-Hispanic HHAs 33.3%, and non-Hispanic Other home health aides' intent to leave was 54.5%. The top reasons for intending to leave among non-Hispanic White HHAs were job opportunity (10.6%) and pay (7.7%), and workload (4.0%). Non-Hispanic Black HHAs cited pay (16.3%) as the most important reason, followed by job opportunity (10.9%) and educational advancement (6.3%), and non-Hispanic Other HHAs, job opportunity (17.6%), moving (15.7%), and health/well-being (10.2%).

Workplace Environment

A home healthcare agency may operate under one of three types of business models. Some home healthcare agencies are run by local, county, or State governments and do not seek to make a profit. Non-profit agencies are private nongovernmental entities that are exempt from Federal income tax and are usually supported at least in part by private contributions, philanthropic foundations, or non-profit hospitals. Finally, proprietary agencies are privately owned or owned by investors and traded on the stock market and have profits-making as a primary business goal. These are important distinctions when considering HHA job satisfaction. Two studies reported that intention to leave is higher in for-profit home health agencies than non-profit agencies (Jang, Lee, Zadrozny, Bae, Kim & Marti (2017), McCaughey, McGhan, Kim, Brannon, Leroy & Jablonski (2012), Jang also found that workers in chain-based home health agencies were more likely to express an intent to leave their job than those who worked for non-chain agencies. Both studies focused on work-related injuries, and study results pointed to improved supervision and training.

Yoon, Probst & DiStefano (2016) carried out an analysis of the female participants in the 2007 NHHAS using the long-term care stress and support model (LTC-SSM) adapted from work

done by Ejaz, Noelker, Menne & Bagaka (2008). The Ejaz model is focused primarily on worker and workplace factors and incorporates background characteristics of direct care workers, characteristics of their organizations, and management issues. The model seeks to explain how stress and support sources at both the individual and organizational levels affect direct care worker job satisfaction. Yoon's analysis used job satisfaction as the dependent variable and selected the following independent variables: personal characteristics, agency characteristics, personal stressor, job-related stressors, personal support, organizational support, and supervisor support. Specific components of organizational support include benefits, training, and availability of healthcare benefits. Personal support encompasses being respected, having challenging work, being trusted, and having confidence in one's abilities. Supervisor support is defined as providing clear instructions, supporting career progression, listening to HHA's concerns about patients, and telling the HHA when she is doing a good job. Yoon found that personal (childcare and family stress) and job-related stressors (problems with agency staff and co-workers, problems with the agency, and misinformation about patient and patient assignments) were all inversely associated with job satisfaction. All organizational support components, personal support, and supervisor support were positively associated with job satisfaction. Yoon concluded that supportive supervision results in aides viewing their jobs more positively, leading to greater worker commitment and higher job satisfaction. This study reinforces the need to explore other factors in supervisor behavior that enhance an environment of supportive leadership.

A grounded theory study by Franzosa, Tsui and Baron (2018) examined the effects on HHAs of the emotional investment in the caring work they perform – caring for ill, dying, aggressive or disoriented clients and prioritizing patient needs above their own, and how they

cope with emotional labor and what support they desire. Studies in the nursing home environment have shown the positive benefits for both the residents and aides of the aides' emotional investment (Barsade & O'Neill, 2014). Franzosa developed a model that identified three primary domains that contribute to overall home care worker well-being: economic, physical, and emotional. Agency factors that influence an aide's emotional well-being include whether the aide feels valued as a professional and acknowledged as an individual, supported by involved supervisors who provide training and mentoring and feeling a greater sense of control of their work-life balance through communication, appropriate scheduling and integration into the care team. Aides expressed the need for more connection and communication with supervisors and each other. This is not surprising as nursing research (Karimi, Cheng, Bartmran, Leggat & Sarkeshik, 2015) found that institutional and supervisor support in highly emotionally demanding jobs generates job satisfaction and a sense of control over work.

In another study, Franzosa, Tsui, & Baron (2018) convened four focus groups (a total of 27 workers) who were members of the United Healthcare Workers East union in the New York City Area. The focus groups were asked to address the emotional demands they face in the context of their working conditions and how these impacted their well-being, how they cope, and the support they feel is needed on and off the job. One of the relationships that aides identified as being key to their well-being was agency supervisors. The aides frequently described their supervisors as unsupportive, lacking in respect and appreciation for their work, and viewing aides as "interchangeable" and merely a body to care for the client. When an aide had an issue, it was usually very difficult, if not impossible, to reach a supervisor. Aides were also asked what supports they would most like to have. These were divided between employer/ union/institutional support and peer supports. Aides listed eight employer/union/institutional

supports: a "hotline" with someone who will "listen to you" (designated agency coordinator, or outside advocate to "represent us in the agency"); open, responsive communication across the care team (nurse, coordinator, family, and aide); in-service training focusing on aides' needs (dementia care, death and dying, managing "difficult patients); boundary-setting with patients' families; supervisor check-ins and home visits' grief counseling and mental health services; paid time off; and control over scheduling. Aids request three peer supports - support groups or one-on-one peer support; classes and educational and social opportunities to interact with peers; and a magazine with advice from peers and experts on coping strategies and skills.

Three of the eight employer/union/institutional support factors – a hotline with someone who will "listen to you," open responsive communication, and supervisor check-ins and home visits all relate to the need for communication and touchpoints with the organization and supervisor.

Summary – Home Healthcare Aide Job Satisfaction

Despite decades of research into job satisfaction, the HHA turnover rate continues to rise. Increased compensation is viewed as a solution to reducing HHA turnover, however, government reimbursement rates for non-institutional care are decreasing while the hurdles to receive Medicare and Medicaid dollars are rising.

Part-time work and wanting more hours increase the intent to leave a job. Workers with a high household income were more likely to intend to leave their jobs than aides from lower-income homes.

Factors related to organizational, personal, and supervisor support increase job satisfaction – availability of training, being respected, having challenging work, being trusted,

having a supportive supervisor, and receiving positive feedback from a supervisor. Feeling valued by one's organization and perceiving the work to be challenging were correlated with a lower intent to leave. Consistent patient assignment significantly lowered intent to leave. A work-related injury increased the intent to leave the job.

Because HHAs function mainly autonomously due to the nature of their work - most of their workday is spent traveling and working at client homes. Study results reveal the voiced need for greater connection and communication with their institution, supervisors, and peers (Franzosa, Tsui & Baron, 2018). The question becomes: What does greater connection and communication look like for home health aides, and how do agencies create the needed communication processes?

Communication Processes, Organizational Commitment, and Intent to Leave in the Nursing and CNA Population

Social identity theory provides the basis for understanding how organizational and team identification promotes attachment and reduces intent to leave (Insko, Schopler, Kennedy, Dahl, Graetz, & Drigotas (1992). "Identification is a communication-based variable that refers to the process by which individuals affiliate with reference groups through the interactions with members of those groups" (Cheney, 1987). Vancouver and Schmitt (2006) demonstrated that communication with peers affects intent to leave. And, McNeese-Smith and Crook, 2003 also showed the link between communication and organizational commitment.

Jablin (1987) explored the role of communication in the turnover process. His model delineated eight communication categories: organization-wide communication, organizational structuring characteristics, integration in emergent communication networks, supervisor

communication relationships, co-worker communication relationships, communication-related work expectations, perceived role ambiguity and conflict, and communication–related traits and competencies. He hypothesized that organizational communication reinforces employee's feelings of organizational identification. The higher an employee's feelings of organizational identification, the greater their commitment, and the lower the turnover. Employee job commitment is a direct predictor of intent to leave and subsequent turnover.

Scott et al. (1999) concentrated on three of Jablin's communication categories: organization-wide communication, supervisory communication relationships, and co-worker communication relationships. Scott found that supervisory communication relationships and co-worker communication relationships are the strongest predictor of intent to leave.

Communication Processes Influencing Nurse Turnover

The nursing profession also experiences high turnover levels, which has resulted in a nursing shortage, particularly in hospitals, where turnover is a threat to patient safety. Providing monetary incentives and recognition programs are the most popular retention tools for hospitals. However, incentives and recognition programs do not address environmental work factors, which are important reasons nurses stay or leave their jobs (Tri-Council for Nursing, 2001).

Based on Jablin and Scott's work, Apker, Propp, and Ford (2009) conceptualized a set of nurse-team communication practices that influence nurse turnover. Identification is a communication-based variable that refers to how individuals affiliate with teams through their interactions with members of those teams (Vancouver & Schmitt, 2006). Social identity theory links an individual's self-concept to the various social groups they interact with (Tajfel & Turner, 1986). When an individual makes decisions in the best interests and goals of the organization or

team of which they are a part, even when such decisions impact their own life, they identify with the organization. Employees who identify strongly with their institution are less likely to leave their jobs (Kuhn & Nelson, 2002).

In hospitals, multidisciplinary patient-care teams consisting of physicians, nurses, and other allied health care professionals are the primary work unit responsible for planning and providing services to patients. Health communication scholars found that peer-communication and superior-subordinate interactions influenced the quality of work-life in nursing (Ray, 1987). L.A. Ford and Ellis (1998) found that nurses who received supportive communication from peers and supervisors were less likely to experience burnout, and therefore, less likely to leave their jobs. Apker et al. (2009) found that supportive communication from supervisors and co-workers were a predictor of organizational identification and increased attachment to employers.

Nurses are the vital link in the cohesion among the patient-care team members who often function autonomously and from disparate locations while performing their patient care roles. Apker et al. (2009) found that nurses' effective communication with other patient care team members is critical to patient outcomes. Ford, Propp, Apker, Recker, and Hofmeister (2006) identified three nurse-team communication processes that nurses use in interacting with team members: promoting team synergy, ensuring quality decisions, and individualizing communication. These three processes are composed of 12 core nurse-team communication practices that contribute to the nurse quality of work-life conditions (Propp, Apker, Ford, Hofmeister, Wallace and Pelletier, 2005).

Using the core-team nurse communication practices, Apker et al. (2009) undertook a rigorous multi-step approach to develop a 65-question Nurse-Team Communication Inventory (NTCI) to study the link between the three processes identified above and nurse intent to leave.

The study found that only one of the three communication processes - promoting team synergy was (inversely) related to nurses' intent to leave. The study also predicted that this relationship would be mediated by organizational or team identification. As nurses engage team members using specific communication practices, team and organization attachment is promoted and ultimately influences turnover. Another important finding was the relationship between mentoring, one of the specific communicative practices studied (listed below), team and workplace identification, and nurse turnover intent. Mentors in nursing are known to increase nurse job satisfaction and staff productivity. Finally, the Apker study indicated that organizational identification was a stronger predictor of intent to leave than team identification. One possible explanation for this is that team members often work remotely, and the hospital is a visible, consistent target for nurse identification (Apker et al., 2009).

Promoting team synergy is comprised of the following seven specific supervisor communicative practices that are inversely related to intent to leave: (a) fostering a positive climate – displaying respect, cheerfulness, and humor to create an upbeat environment; (b) managing workplace stress – portraying optimism and calmness, thereby helping others cope; (c) listening actively to team members – being open to and affirming others' ideas; (d) pinch-hitting for team members – conveying a willingness to share responsibilities and help team members; (e) mentoring peers – guiding and supporting team members, especially less-experienced nurses; (f) empowering lower-level team members – valuing subordinates by sharing information and including them in problem-solving; and (g) coordinating the patient care team – communicating tasks, explaining roles, and demonstrating leadership. These seven communicative processes provide the theoretical foundation for this research. Factors from the NHHAS study analogous

to Apker processes will be used as the independent variables in this research to test the effect of communication processes, especially communication from supervisors, in HHA intent to leave.

A very recent study published in the journal Communications Studies by Muriel Scott (2020) examined barriers to organizational identification among remote healthcare workers. Scott interviewed 34 certified home health aides and 16 supervisors. The average age of the aides was 44.4 years and ranged in age from 21 to 67. Their job tenure ranged from less than one year to 28 years, with most working as a home care aide from 1 to 5 years. Most were working for more than one agency. Most of the aides were black (30), 13 were white, and one was South Asian. Only four of the aides were male. Some supervisors were registered nurses, while others did not have a healthcare background. Scott found several barriers to aides identifying with their agency. The first is limited interaction with supervisors and other aides. Due to their work's remote nature, aides rarely went into the office and talked to their supervisor less than an hour per week. Some did not even know who their supervisor was or had multiple supervisors depending on patient assignments. Getting in touch with their supervisor was also a problem. In at least one agency, in-service training consisted of pamphlets mailed to the aide.

The second barrier was an aide's close relationship with their patients. Aides lose their objectivity during the many hours they spend in homes getting to know the individuals under their care and shift their loyalty to their patients. Although aides are told to provide only services specified in the care plan, aides often ignore this directive and do extra tasks. One aide said she takes the patient's dog to the vet, and another cared for a cat. Others do extra cleaning. Their work morphs from being a job to being a relationship.

Lack of status and respect within their agency and low pay also affect an aide's attachment to their organization. Aides said they were not included in discussions about their

patients, and on occasions where a home nurse visited a patient, aides were treated as though they had no knowledge of their patient's condition. Low pay also makes aides feel undervalued and forces them to take additional jobs with other employers, which results in them splitting their loyalties among two or more agencies.

Scott concludes that the key to helping aides identify with their organization is to strengthen their relationship with their supervisor through more frequent interactions and mentoring, making supervisors the target of identification for the aides.

Other studies in the nursing and CNA literature investigating the role of communication in intent to leave are discussed below.

A study published in 2015 by Van Waeyenburg, Decramer, and Ansel demonstrates the importance of supervisor communication practices to reducing intent to leave in the nursing population. Van Waeyenburg et al. examined how informal supervisory feedback and "self-efficacy" affected home nurses' turnover intentions (not nursing aides) in Belgium. Self-efficacy is defined as the "belief in one's own ability to complete tasks and reach goals and increase effort, persistence, goals setting and performance" (Bandura, 1997). Research has shown that feedback can increase self-efficacy, which improves job satisfaction and the quality of nursing care (Lee & Ko, 2010). The authors postulated that home nurse self-efficacy mediates the relationship between the quality of feedback and turnover intentions. Compared to traditional nurses who work in institutions, home nurses cannot rely on frequent informal supervisory feedback due to their remote work.

A questionnaire was used to collect information from the nurses about their interactions with supervisors. The dependent variable was intent to leave measured on a five-item scale in response to the statement, "I will probably look for a new job in the next year." The data

collection tool addressed the following question related to the quality of feedback and the frequency of favorable and unfavorable feedback: the feedback I receive from my supervisor is useful; when I do a good job at work, my supervisor praises my performance; and, on those occasions when I make a mistake at work, my supervisor tells me. Self-efficacy was measured on an 8-point scale in response to the question, "I will be able to achieve most of the goals that I have set for myself."

The researchers found that high-quality feedback decreases home nurses' turnover intentions by increasing their self-efficacy. The frequency of favorable feedback was inversely related to turnover intentions. The relationship between unfavorable feedback and turnover intentions was dependent on a home nurses' existing self-efficacy level. If a nurse reported low self-efficacy, their turnover intentions were higher. These results demonstrate that the frequency and quality of supervisory feedback are important for improving retention, especially when caregivers work at remote locations.

Brunetteo et al. (2013) examined the relationship between supervisors and nurses and organizational factors, including teamwork, wellbeing, and organizational commitment on the intention to leave. He also examined responses across three different generational cohorts of nurses – Baby Boomers (born 1943–1960), Generation X (born 1960 – 1980), and Generation Y (born 1980-2000).

The independent variables for the study are listed below. The relationship between supervisors and nurses was examined using the seven statements below. Social exchange theory recognizes the presence of teamwork when colleagues interact in a meaningful way, trust each other, and share information and resources (Edmondson 2003). Nurse perspectives about teamwork were assessed using five statements. Well-being is defined by Diener (2000) as

employees' attitudes and feelings about their work context. Affective or organizational commitment occurs when employees are engaged in and emotionally attached to their workplace and jobs and want to continue to work for the same organization. The statements used to study wellbeing and affective commitment also appear in the table below. The research used an online survey at two hospitals and gathered 718 usable surveys.

The study found that about half of nurses' organizational commitment and intention to leave is influenced by the quality of supervisor-subordinate relationships, teamwork, and wellbeing. Baby Boomers have higher satisfaction levels with their supervisor-subordinate relationships, teamwork, wellbeing, and organizational commitment and have lower turnover intentions. This means that nurses are only somewhat satisfied with workplace relationships, lack a high level of wellbeing, and are only partially committed to their workplaces. Baby Boomer nurses were the most committed to their workplace, Gen Xs were somewhat committed, and Gen Ys were between somewhat committee and somewhat uncommitted. These results indicate that the most important focus for nurse managers is to improve workplace relationships, particularly addressing supervisor-subordinate. Another important finding is the need to consider generational differences in any strategy aimed at increasing employee retention. This article's relevance to the current research is that it again demonstrates the critical role the nursing supervisor and the organizational context play in a nurse deciding whether to stay or leave their job.

Table 1

Brunetteo Study Variables

Supervisor-Subordinate Relationship • My supervisor is satisfied with my work • My supervisor understands my work, problems, and needs • My supervisor is willing to use his/her power to help me solve work problems • I have a good working relationship with my supervisor • My supervisor is willing to help me at work when I really need it • My Nurse Unit Manager (NUM) recognizes my potential • I have enough confidence in my NUM that I would defend and justify his/her decisions even if he/she was not present
Wellbeing • Overall, I am reasonably happy with my work life • Most days, I feel a sense of accomplishment in what I do in the workplace • Overall, I fulfill an important purpose in my work life
Affective Commitment • I would be very happy to spend the rest of my career with this hospital • This hospital has a great deal of personal meaning for me • I enjoy discussing my hospital with people outside it • I feel a strong sense of belonging to this hospital • I feel strong ties with this hospital • I do not feel emotionally attached to this hospital
Teamwork • People I work with are cooperative and considerate • People I work with constructively confront problems • People I work with are concerned about each other • People I work with resolve disagreements cooperatively • When I complete my work tasks, I am happy to help the nurses
Turnover • I frequently think about leaving my current employer • It is likely that I would search for a job in another organization • It is likely that I would actually leave the organization within the next year

Certified nursing assistants (CNAs) provide most of the hands-on patient care in nursing homes. The CNA workforce faces the same retention issues as the nursing and home health professions, and when adequate staffing levels are not maintained, the quality of patient care in any health care setting suffers. Choi and Johantgen (2012) analyzed data derived from the 2004

National Nursing Home Survey (NNHS) and the 2004 National Nursing Assistant Survey (NNAS) to examine the relationship between work-related and personal factors to CNA job satisfaction and intent to leave.

Job satisfaction was measured using responses to a question asking the CNAs whether they were satisfied with their job by responding to a 4-point scale from 1=extremely dissatisfied and 4=extremely satisfied. Intent to leave was assessed by asking CNAs, "How likely is it you will leave this job in the next year?" Responses were dichotomized to 1=very or somewhat likely and 0=all other responses.

The analysis included data for CNA age, hourly wage, employee benefits, health insurance status, race, educational level, number of jobs in the previous five years, whether they had been injured at work, and the type of nursing home in which they worked.

Supportive supervision was examined using ten items from the NNAS. CNAs were asked to agree or not agree with the items based on the supervisor to whom they were directly responsible. The items were: treats all CNAs equally; deals with CNAs complaints and concerns; is open to new ideas; helps the CNAs with job tasks; supports CNAs working in teams; tells CNAs when they are doing a good job; provides clear instructions; disciplines CNAs not performing well; listens to the CNAs concerns about residents' care; and is supportive of progress in the CNAs career. Responses to these questions offered a score from 1 to 4. The CNAs were asked an additional question about whether they felt their employer valued them; the question had two possible responses, 1=very/somewhat and 0=not at all. A total of 2,254 CNA responses were included in the sample. Logistic regression was used to analyze the relationship of job satisfaction and intent to leave with supervisor support variables, personal and other work-related factors.

The average age of the CNA sample used in the study was 38.2 years. Less than 20% of the aides received health insurance, 45% were non-white, 75% had a high school or less education, and 59% had between 2 and 4 jobs in the last five years. Most CNAs worked in large (>100 bed) nursing homes in a metropolitan area. About two-thirds of aides worked in for-profit nursing homes, with the remainder working in private, city/county, state, and federally supported nursing homes. About 60% of CNAs reported that they had been injured at least once in the past year.

Age, education, and job history were significantly related to intent to leave. However, none of the personal factors, such as job history, was related to job satisfaction (Choi and Johantgen 2012).

About 25% of the CNAs reported that they were likely to leave their jobs in the coming year. Supportive supervision was significantly related to both job satisfaction and intent to leave. For each unit of increase in supportive supervision, CNAs were 4.09 times more likely to be satisfied with their jobs and 47% less likely to intend to leave their jobs. Being valued by an employer and having employee benefits were also significantly associated with higher job satisfaction. Aides who experienced a work-related injury were 47% less likely to be satisfied with their job. The only work-related variables significantly associated with intent to leave were hourly wage and health insurance. CNAs were 12% less likely to leave if they were given a one dollar per hour wage increase and 35% less likely to intend to leave if they had health insurance. This study provides further support for the importance of supportive supervision on the retention of direct care workers. It also underscores the need for better wages and benefits for the direct care workforce.

The Intersection of Communication Theory and Determinants of Job Satisfaction

Many of the factors predicting HHA job satisfaction and wellbeing have counterparts in the communicative practices for promoting team synergy (see Table 2).

What has not been modeled in HHA job satisfaction literature is the effect of a set of variables representing communication practices on intent to leave. The Apker literature provides an opportunity to recognize selected variables from the NHHAS dataset as elements of communication. The advantage of regarding factors such as respect, providing clear instructions, and mentoring as communication elements is that very intentional training and organizational standard operating procedures can be crafted that improve communication processes in the home health care setting. A prerequisite to organizational change in home healthcare agencies is providing employers with specific communication factors that predict HHA turnover. Developing such a model is one of the primary aims of this study.

Literature Review Summary

The care required by a rapidly aging population will continue to expand in the coming years. However, the availability of one of the primary resources needed to provide that care, namely home health aides, is not keeping pace with the demand. Researchers have sought to identify the underlying causes of the poor recruitment and retention of the home healthcare aide workforce. Many factors have been identified that affect whether a home health aide is satisfied with their job and will continue to work for their employer, switch to another home health agency looking for a better situation, or leave the field altogether. The literature review provided

a thorough description of essential studies that examined these factors. However, several observations can be made when reflecting on the status of HHA job satisfaction research.

First, despite decades of research, HHA turnover rate continues to rise. One interpretation of this situation is that little reduction to practice of the factors already identified that reduce intent to leave has occurred. Understanding why this is so is beyond the scope of this research – with one exception, which is the issue of compensation. Arguably, the most crucial factor consistently raised when considering HHA retention is the low compensation home health aides receive. Most agencies cannot afford to raise hourly wages and provide benefits. The average hourly wage for a home health aide in 2020 ranged from $11 to $14 per hour (salary.com, 2021), which on an annual full-time basis is $23,000 to $29,000. However, as discussed in the literature review, most aides must work more than one job to make a full-time salary because most employers do not offer them 40 hours a week. To put a home healthcare worker's annual wage in perspective, Walmart pays general service employees on average $13.00 per hour (*Walmart.com Hourly Pay | PayScale*, 2019) and can provide a regular schedule as well as benefits.

The second observation is that an understudied area in HHA intent to leave research is the effect of organizational and communication processes in reducing intent to leave. The literature examining organizational and communication processes among nurses and CNAs is more robust. The situation is understandable from a practical standpoint. The nursing and CNA populations are much easier to access for interviews and surveys as they carry out their work in stationary locations. HHAs, on the other hand, work in dispersed locations and often have difficulties in reaching even their direct supervisor.

The third observation is that many of the studies purporting to examine the HHA population include other direct care worker disciplines. The NHHAS is an example of a survey with a functionally mixed sample.

This study aims to identify communication processes in the HHA population that reduce intent to leave. These processes must be practical and cost-effective to allow implementation through training at the agency level. Furthermore, the study population must include only those aides who work remotely at a patient's home. The HHA work environment is key to gaining feedback about what communication processes are working well, not working, or not present.

CHAPTER 3

METHODOLOGY

Introduction

This study examines communication practices used by organizations and supervisors and the aides they employ to deliver care in a patient's home and the effect of such practices on a home health aide's intent to leave their job. Of specific interest is the relationship between the supervisor and home health aide and whether these individuals' interactions contribute to a home health aide's intent to leave their job. The purpose of this study is to identify cost-effective organizational practices that home healthcare agencies could implement through training to decrease employee turnover. This chapter will define the research questions and hypotheses, research methodology and design, population and sample selection, data source, and data analysis procedures.

Research Questions and Hypotheses

The research questions and hypotheses about the effect of organizational and supervisor communication practices on the intent of a home health aide to leave their job are below:

Research Questions

1. What is the effect of organizational communication variables on home healthcare aide's intention to leave their job in the coming year?
2. What supervisor variables affect whether a home healthcare aide intends to leave their job in the coming year?

Research Hypotheses

Literature from multiple disciplines has highlighted the importance of the supervisor's role and organizational characteristics in worker intent to leave (see list of publications in Table 2). Analysis of NHHAS data has shown that feeling valued by one's organization is significantly inversely related to intent to leave (Wilhelm et al. 2015 and Stone et al. 2017) and that organization and supervisor support weaken the effect of job stress on job satisfaction (Yoon, Probst & DiStefano, 2015). Literature in other front-line healthcare worker populations has also shown the importance of an aide's relationship to their supervisor in developing organizational attachment and reducing turnover intent. Not fully explored to date is a more robust set of supervisor and organizational characteristics set of variables that approximate communication processes in healthcare communication theory.

These hypotheses are crafted to examine various aspects of verbal and nonverbal supervisor communication and interactions of aides with their peers and their effect on HHA intent to leave. The first hypothesis tests the effect of supervisor variables that involve high amounts of verbal communication initiated primarily from the supervisor and aimed at aides. The second hypothesis tests the effect of the first set of variables and two additional variables

describing attitudes that the supervisor might have toward their aides, which may be spoken or unspoken, and make aides feel valued and respected. The third hypothesis includes the control variables age and race to those in the second hypothesis. Based on prior literature, it is likely that a negative correlation between one or more of the independent variables and intent to leave will be seen and that the addition of the organizational variables and the control variables will increase the effect of these variables on intent to leave. The dependent variable is expected to decrease as aide responses to independent variables (See Table 2 for the complete list of study variables and their definitions) are more affirmative. Aides who agree more strongly with the independent variable statements will be less likely to intend to leave their job in the coming year.

H1: There is a statistically significant inverse relationship between one or more Base Supervisor Communication Variables (SUPCLEAR; SUPADVAN; SUPHEAR; SUPTELLS; PROBSUB; NOWSUP) and a home health aide intending to leave their job in the coming year.

H2: There is a statistically significant inverse relationship between one or more Full Supervisor Communication Variables (SUPCLEAR; SUPADVAN; SUPHEAR; SUPTELLS; PROBSUB; NOWSUP; RESPECTS; SUPVALUE) and a home health aide intending to leave their job in the coming year.

H3: There is a statistically significant inverse relationship between one or more organizational communication variables and control variables (SUPCLEAR; SUPADVAN; SUPHEAR; SUPTESLLS; PROBSUP; NOWSUP; RESPECTS; SUPVALUE; NOWCWORK; ORGVALUE; AGE; RACERCODE) and a home health aide's intent to leave their job in the coming year.

Data Source

The National Home Health Aide Survey (NHHAS) provides a valuable dataset for this analysis as it is the only nationally representative database in existence that describes home healthcare worker attributes and attitudes. The NHHAS study was sponsored by the Office of the Assistant Secretary for Planning and Evaluation (APSE) and conducted in partnership with the National Center for Health Statistics (NCHS). The NHHAS was conducted between September 2007 and April 2008 as a supplement to the National Home and Hospice Care Survey (NHHCS), a nationally representative survey of Medicare and/or Medicaid-certified state-licensed home health and hospice agencies (Bercovitx et al., 2010). A total of 1,036 home care agencies completed the NHHCS. The NHHAS study utilized the same list of 1,036 agencies selected by the NHHCS and surveyed between one and six aides employed by each of the participating agencies. A total of 3,377 home health workers, certified nursing assistants, hospice aides, and home care aides/personal care attendants completed the survey, which was conducted via a computer-assisted telephone interviewing system. The extensive questionnaire included questions about recruitment, training, job history, family life, management and supervision, client relations, organizational commitment, and job satisfaction, workplace environment, work-related injuries, and demographics (NHHCS - National Home Health Aide Survey, 2019).

Selection of Variables

Variables selected for the current research project were chosen based on those available in the NHHAS dataset that were representative of the communicative practices identified by Apker et al. (2009), as well as behaviors identified in the literature regarding the effect of

organizational dynamics, including supervisor/subordinate relationships on employee retention, as discussed in Chapter 2. Apker et al. postulated a set of communicative practices based on healthcare communications literature and qualitative and quantitative research among nursing staff in a hospital. She identified a set of practices that were significantly inversely related to intent to leave. These encompassed supervisor activities aimed at promoting team synergy, namely fostering a positive climate – displaying respect, cheerfulness, and humor to create an upbeat environment; managing workplace stress – portraying optimism and calmness; listening actively to team members – being open to and affirming others' ideas; pinch-hitting for team members conveying a willingness to share responsibilities and help team members; mentoring peers-guiding and supporting team members, especially those less experienced; empowering lower-level team members-valuing subordinates by sharing information and including them in problem-solving; and, coordinating patient care teams – communicating tasks, explaining roles and demonstrating leadership (Apker, Propp, & Ford, 2009). A major theme in Apker's work applicable to the home health care environment is the importance of the supervisor/subordinate relationship and the effectiveness of communication between the organization, supervisor, and home care aides. This theme is reflected in NHHAS questions related to the clarity of instructions and assignment of work, the existence of any communication problems with agency staff; supportiveness of the supervisor for an aide's career, supervisors listening to concerns raised by the aide, being told by a supervisor that they are doing a good job, whether an aide feels respected and valued by the supervisor and organization for whom they work and whether the supervisor or coworkers cause an aide to like or dislike their job.

Literature supporting the selection of variables is summarized below. A list of these references can be found in Table 2. Some of these studies were discussed in more detail in Chapter 2. Other study summaries are provided as additional support for variable selection.

In an analysis of the NHHAS data Wilhem, et al. (2015) and Stone et al. (2017) found that feeling valued by one's organization was significantly inversely related to intent to leave. In an open-ended survey of a mixed population of direct care workers employed at nursing homes, assisted living facilities, and home care agencies, Kemper (2008) asked aides for their recommendations on how to improve their jobs. Relevant to this research are improving work relations and communication with supervisors, listening to direct care workers, and valuing and respecting direct care workers. Banijamali, Jacoby, and Hagopian (2014) found that poor wages and benefits forced aides to leave their jobs to go back to school to pursue better career opportunities. Van Waeyenberg, Decramer, and Anseel (2015) found that both the quality of supervisor feedback and frequent favorable feedback lowered intent to leave among home nurses in Belgium. In an analysis of data from the NHHAS, Yoon, Probst, and DiStefano (2015) found that organizational and supervisor support weakened the negative relationship between job satisfaction and job-related stress. They concluded that support from organizations and supervisors would improve home health aide job satisfaction. Franzosa et al. (2018) found that aide's well-being was influenced by relationships with their clients and supervisors and the extent to which they felt valued by their supervisors. Aide's wanted more communication, connection, and support from supervisors and peers.

Sengupta, Ejaz, and Harris-Kojetin (2012) analyzed data from the NNAS (a national survey of certified nursing assistants) and the NHHAS to understand the similarities and

differences between CNA and HHA perception of their initial training. All CNAs but not all HHAs received initial training. HHAs were more likely to receive their training at a high school or community college, whereas CNAs receive their initial on-the-job training at a nursing home. Those HHAs and CNAs who received both in-classroom and hands-on training felt better prepared for their jobs than those who only received classroom training. Gleason and Miller (2021) analyzed data from the 2017 study of the Massachusetts Home Care Aide Survey. They found that HHAs who felt supported by their supervisor and agency were more satisfied with their jobs. However, support did not lower intent to leave. Aides who felt they had autonomy in the performance of their job responsibilities were satisfied with their jobs and were less likely to intend to leave their jobs. In an exploratory study, Buelow, Winbur, and Hutcherson (1999) surveyed a group of 42 home care aides to determine how management practices affect job satisfaction. They found several manager behaviors that positively affected aide's job satisfaction: providing positive performance feedback, attending to aide's personal development; showing professional respect; weaving the organization's mission into every-day work; and using in-service training to address specific client issues. Choi and Johantgen (2012) analyzed data from the 2004 National Nursing Home Survey and the 2004 National Nursing Assistant Survey. They found that supportive supervision increased job satisfaction and lowered intent to leave. Using a mixed-methods approach, Morgan, Dill, and Kallebert (2013) collected data from frontline healthcare workers (nursing assistants, respiratory therapy technicians, social and human service assistants, home health aides, mental health counselors, and medical transcriptionists) to determine the extent to which intrinsic rewards compensated for the low extrinsic rewards of wages and benefits when predicting job satisfaction and intent to leave. Intrinsic rewards were defined as supervisor support, input into job tasks, the meaning of job

tasks, and coworker support. They found that both intrinsic and extrinsic rewards contributed to job satisfaction, but only the extrinsic rewards of wages and benefits predicted intent to leave. Maertz et al. (2007) studied the effects of the perceived supervisor support (PSS) and perceived organizational support (POS) in a population of social services workers. PSS and POS are known as "relational inducements" in organizational theory and are important in an employee's decision to stay or leave a job. This study found that the strength of a worker's relationship with a supervisor can increase an employee's commitment to their organization, thereby decreasing intent to leave, even when the job or the organization is viewed negatively.

Definition of Variables for Analysis

The dependent variable "LEAVEJOB" was defined in the NHHAS as the likelihood that a home health aide would leave their job in the next year. The NHHAS code categories for this variable were: 1 = very likely; 2 = somewhat likely; 3 = not at all likely; -1 = inapplicable/not ascertained; -7 = (RF) respondent refused to give an answer; 8 = (DK) respondent did not know the answer. For this analysis, categories 1 and 2 were combined, creating the dichotomous dependent variable, 1 = very likely/somewhat likely and 0 = very unlikely to leave the job in the next year. Code categories -1, -7, and -8 were eliminated for this and all predictor variables. As noted in the literature review, intent to leave one's job is an experimentally proven indicator of an individual actually leaving their job (Castle, Engberg and Anderson 2007 and Stone et al., 2017, among others). Intent to leave was also Apker's chosen dependent variable.

Table 2 demonstrates how the NHHAS independent variables are illustrative of the Apker "promotes team synergy" communicative practices. While there is not an absolute one-to-one association between Apker's and the NHHAS variables, by examining the definition of Apker's

communication practices, it is possible to understand how the components of promoting team synergy are present in the NHHAS independent variables. This study does not seek to draw a statistical correlation between the two sets of variables. Instead, it postulates that prior research in healthcare organizational communication practices that have been shown to influence worker intent to leave is applicable in studying the influence of similar communication practices in home health care workers intent to leave.

Table 2

Derivation of the Dependent and Independent Study Variables

NHHAS Variable	***NHHAS Meaning***	**NHHAS Variable Description**	**Representative Apker "Promotes Team Synergy" Variable**	**Literature Review Support for the Use of NHHAS Variable**
LEAVEJOB	How likely is it that you will leave your job in the next year?	Dichotomous dependent variable; 1=very/somewhat likely; 0=not at all likely	Apker used the same dependent variable.	Kraut, 1975; Murrels, Robinson & Griffiths, 2008; Stone et al., 2017; Wilhelm, Bryant, & Stone, 2015
SUPCLEAR	My supervisor provides clear instructions when assigning work.	Categorical independent variable: 1=strongly agree; 2=somewhat agree; 3=somewhat disagree; 4=strongly disagree	Coordinating patient care team	Kemper, et al. 2011; Stone, et. al., 2017; Van Waeyenberg, Decramer & Anseel, 2015; Yoon, Probst, & DiStefano, 2016
SUPADVAN	My supervisor is supportive of progress in my career, such as further training.	Categorical independent variable: 1=strongly agree; 2=somewhat agree; 3=somewhat disagree; 4=strongly disagree	Mentoring peers; Empowering lower-level team members	Benijamali, Jacoby, & Hagopian, 2014; Franzosa, Tsui, & Baron, 2018; Kemper, 2011; Stone, et. al., 2017; Sengupta, Ejaz, and Harris-Kojetin, 2012; 2017; Stone & Bryant, 2019; Yoon, Probst, & DiStefano 2016
SUPHEAR	My supervisor listens to me when I am worried about a patient's care	Categorical independent variable: 1=strongly agree; 2=somewhat agree; 3=somewhat disagree; 4=strongly disagree	Listening actively to team members	Franzosa, Tsui, & Baron, 2018; Gleason, et. al., 2016; Kemper, 2011; Van Waeyenberg, Decramer & Anseel, 2015; Yoon, Probst, & DiStefanl, 2016
SUPTELLS	My supervisor tells me when I am doing a good job	Categorical independent variable: 1=strongly agree; 2=somewhat agree; 3=somewhat disagree; 4=strongly disagree	Fostering a positive climate; Managing workplace stress	Buelow, Winburn, & Hutcherson, 1999; Choi and Johantgen, 2012; Van Waeyenberg, Decramer & Anseel, 2015; Yoon, Probst, & DiStefanl, 2016

Table 2—Continued

CPROBSTF	Aides were asked to respond to 1 or more of 11 different types of problems that made their job difficult or caused them to dislike their job. Of the 11 statements, four were relevant for this study:	1=Aide communication problems with agency staff	Coordinating patient care team; Empowering lower-level team members	Brunetto et al. 2013; Franzosa, Tsui, & Baron, 2018
CPROBHTH		2=Misinformation from the agency about a patient's health	Coordinating patient care team; Empowering lower-level team members	Franzosa, Tsui, & Baron, 2018; Van Waeyenberg, Decramer & Anseel, 2015
PROBCOWK		7=Problems with coworkers	Coordinating patient care team; Fostering a positive climate	Brunetto, 2013; Franzosa, Tsui, & Baron, 2018
PROBSUB		8=Problems with supervisor	Fostering a positive climate; Listening actively to team members; Coordinating patient care team.	Brunetto, 2013; Franzosa, Tsui, & Baron, 2018; Morgan, Dill, & Kallebert, 2013; Van Waeyenberg, Decramer & Anseel, 2015
NOWCWORK	Do you continue to work in your current job because you enjoy working with the other members of your care team?	Dichotomous independent variable; 1=yes; 2=no	Fostering a positive climate; Managing workplace stress	Brunetto, 2013; Franzosa, Tsui, & Baron, 2018; Morgan, Dill, & Kallebert, 2013
NOWSUP	Do you continue to work in your current job because you enjoy working with your supervisor?	Dichotomous independent variable; 1=yes; 2=no	Promoting team synergy collectively	Brunetto, 2013; Choi and Johantgen, 2012; Franzosa, Tsui, & Baron, 2018; ; Morgan, Dill, & Kallebert, 2013
RESPECTS	To what degree do you feel your supervisor respects you as part of the healthcare team?	Categorical independent variable: 1=A great deal; 2=Somewhat; 3=Not at all	Fostering a positive climate	Gleason and Miller, 2021; Feldman, et. al., 2019; Kemper, et. al., 2011; Stone, et. al., 2017
SUPVALUE	How much do you think your supervisor values or appreciates the work you do as a home health aide?	Categorical independent variable: 1=Very much; 2=Somewhat; 3=Not at all	Fostering a positive climate	Gleason and Miller, 2021; Choi and Johantgen, 2012; Maertz et al., 2007; Yoon, Probst, & DiStefano, 2016
ORGVALUE	How much do you think the organization values or appreciates the work you do as a home health aide?	Categorical independent variable: 1=Very much; 2=Somewhat; 3=Not at all	Fostering a positive climate	Franzosa, Tsui, & Baron, 2018; Merlino, 2017; Maertz et al., 2007; Stone et al., 2017; Stone and Bryant, 2019; Yoon, Probst, & DiStefano, 2016

Control Variables

Age and race are included as control variables. Both age and race have been shown in prior studies to affect intent to leave. This is discussed further below.

Research Design

This is a non-experimental, quantitative research study. An existing dataset will be analyzed to address the research questions and hypotheses stated above. This study will explore the relationship between a home health care worker's intention to leave their job and multiple employer organizational variables that have been shown in other studies to predict intent to leave one's job. Logistic regression will be used to develop a model to explore a home health aide's intention to leave their job based on the relevant independent variables.

Population and Sample Selection

Selection of Cases

The NHHAS study cast a broad net regarding the inclusion of participant work situations. Respondents were provided with four options from which they could choose to identify themselves ("WHEREWRKRC"). These included: 1=one inpatient facility; 2=two or more inpatient facilities; 3=patient homes only; and 4=both home and inpatient facilities. This study focuses on communication processes between agencies, supervisors, and individuals who deliver care in a patient's home. The remote work that HHAs do leads to feelings of isolation and presents communication challenges that are different from those occurring in in-patient facilities. HHAs have limited interactions with their supervisors and coworkers, which impacts how they identify with their organizations, which affects their intent to remain with the organization

(Scott, 2020). Therefore, only those individuals who worked exclusively in patients' homes are included in the data analysis.

Cases Analyzed

By combining categories 1 and 2 in LEAVEJOB and removal of any value in the selected variables less than zero, and the inclusion of only those cases where the respondent indicated that they worked only in the patient's home, the total number of cases analyzed was 986 from the full dataset of 3,337 respondents.

Descriptive Statistics and Data Characterization

In Chapter 4, frequencies of responses to the dependent, independent, and control variables are provided. These analyses will be done for the selected sample of those aides responding that they worked only in a patient's home, as well as the full HHAS dataset of 3,337 cases. This analysis will determine if this study's findings might apply to the broader direct care worker population.

- Frequencies for age groups. In the NHHAS database, the variable AGESEX is a misnomer. This variable only specifies the age of the respondent and is therefore designated AGE going forward. Understanding the population's age distribution is important because an analysis of the full NHHAS dataset by Stone et al., 2015, showed older home healthcare workers were less likely to intend to leave their jobs.
- The racial composition of the sample –White, African American/Black, or other. The sample's racial composition is of interest since prior literature indicates that African

American/Black individuals experience lower job satisfaction and are more likely to intend to leave (Landes and Weng, 2019).

- Frequency of responses to each level of the dependent and independent variables. The variables and levels are provided in Table 3.
- Test of the statistical significance of the difference in the frequency of responses to each level of the independent variables for subjects indicating (1) very likely/somewhat likely to leave the job in the next year and (0) not at all likely to leave.
- A multicollinearity test was also conducted to verify that there are no correlations between the independent variables, which would lead to unreliable results (Wu, 2020).

Logistic Regression Model

Binary logistic regression is a form of regression used when the dependent variable is dichotomous, and the independent variables are of any type, for example, binary, categorical, or continuous. Logistic regression has many analogies to ordinary least squares (OLS) regression: logit coefficients roughly correspond to β coefficients in the logistic regression equation and, a pseudo-r-squared statistic is available to summarize the overall strength of the model. Unlike OLS regression, however, logistic regression does not assume linearity of the relationship between the dependent and independent variables; does not require normally distributed variables; does not assume homoscedasticity; and in general has less stringent requirements" (Garson, 2016). The validity of logistic regression must be based on the absence of multicollinearity among the predictor variables.

In this study, a home care worker's intent to leave their job in the coming year is the binary dependent variable with the options 1=very/somewhat likely to leave, or 0=not at all

likely to leave. The independent variables are a combination of categorical and dichotomous variables derived from the NHHAS and selected due to their similarity with communication variables found to be important in predicting job satisfaction and intent to leave in the nursing profession

Three equations are postulated for estimating the probability that a home health aide would intend to leave their job. The base case includes a small but important subset of the supervisor variables. The second equation includes all variables related to supervisor communications. The third equation encompasses all variables from the NHHAS that reference supervisor and organizational variables plus two control variables.

Base Supervisor Variables Regression

$$Leave\ Job_i = \beta_0 + \delta\ Supervisor\ Clear_i + \delta\ Supervisor\ Advance_i + \delta\ Supervisor\ Listen_i + \delta\ Supervisor\ Tells_i + \varepsilon_i$$

All Supervisor Variables Regression

$$Leave\ Job_i = \beta_0 + \delta\ Supervisor\ Clear_i + \delta\ Supervisor\ Advance_i + \delta\ Supervisor\ Listen_i + \delta\ Supervisor\ Tells_i + \delta\ Supervisor\ Respects_i + \beta_1 \text{Enjoy Working With Supervisor}_i + \beta_2 Problems\ With\ Supervisor_i + \delta\ Supervisor\ Values\ You_i + \varepsilon_i$$

Full Set of Variables Regression

$$Leave\ Job_i = \beta_0 + \delta\ Supervisor\ Clear_i + \delta\ Supervisor\ Advance_i + \delta\ Supervisor\ Listen_i + \delta\ Supervisor\ Tells_i + \beta_1 \text{Communication problems with agency Staff}_i + \beta_2 \text{Patient Misinformation}_i + \beta_3 \text{Problems With Coworkers}_i + \beta_4 Problems\ With\ Supervisor_i + \beta_5 \text{Enjoy Working With Care Team}_i + \beta_6 \text{Enjoy Working With Supervisor}_i + \delta\ Supervisor\ Respects_i + \delta\ Supervisor\ Values\ You_i + \delta\ Age_i + \delta\ Race_i + \varepsilon_i$$

Three regression outputs are provided – ordinary least squares (OLS), the Logit, and the marginal effect (MFX) at the means for every variable. Each analysis provides slightly different

information. The OLS estimates the linear probability of a respondent intending to leave their job. The OLS of a dichotomous variable is a linear probability model. The logit command is used to estimate the logistic regression model for a binary response by maximum likelihood using log odds. It models the probability of a positive outcome. It is a more robust analysis than the OLS, but the logit estimates are difficult to interpret. A logit analysis can provide information about a positive or negative sign and its significance between the dependent and independent variables. The marginal effect uses the logit regression to estimate dy/dx effects analogous to the OLS linear probability model. Marginal effects are interpretable as a change in *dy* for every unit change in *dx*.

Preparing Data for the Logistic Regression

To carry out a logistic regression analysis, several adjustments to the data set were necessary. These are described below.

The dependent variable LEAVEJOB was re-coded as a dichotomous variable. Selections 1 and 2, very likely and somewhat likely, were combined and recoded as "1." This action resulted in 129 changes made.

Response 3 was re-coded as "0." An additional 795 changes were made. Any responses less than 0, i.e., 1=inapplicable; -7=RF, respondent refused to answer; -8=DK, respondent didn't know, were dropped. Eight additional observations were deleted.

Because this research is focused on only those individuals who provide care in a patient's home, any respondent who replied to "Do/did you work at an in-patient facility at your job or do/did you care for patients in their homes?" with selection 1=one inpatient facility; 2=two or more inpatient facilities and, 4=both home and inpatient facility, were dropped. Only cases that

indicated that they provided care in a patient's home were analyzed. This change resulted in the elimination of 2,369 observations.

Any observations <0 for the following variables were dropped: SUPCLEAR; SUPADVAN; SUPTELLS; CPROBSTF; CPROBHTH; PROBCOWK; PROBSUP; NOWCWORK; NOWSUP; NOWSUP; RESPECTS: SUPVALUE and ORGVALE. A total of 13 observations were removed. The resulting database contained 986 observations.

CHAPTER 4

DATA ANALYSIS AND RESULTS

Introduction

This study analyzes data that describes home health care organizations and supervisors' communication methods and the aides they employ to deliver care in a patient's home. This analysis seeks to identify those practices that affect a home health aide's intent to leave their job. Ultimately, the goal is to define a set of organizational communication approaches that home healthcare agencies can implement through internal training to decrease employee turnover. This chapter will present the results of the analyses. Interpretation of the results will be provided in Chapter 5.

Results

Descriptive Statistics

Descriptive statistics were produced for the full data set and the sample to understand the demographic similarities and differences. The following variables were analyzed: age, race, highest grade or year completed in school, marital status, household income, agency type, agency ownership, agency chain affiliation, aide age, and aide race. Age and race are essential to understand because prior studies have shown that these demographics affect intent to leave. Younger aides are more likely to intend to leave their jobs (Stone et al., 2017). Also, African

American/Black aides are more likely to intend to leave their job than whites (Landes and Weng, 2019).

Age

The age range for the study sample was 20 to 65 years of age. The age distribution in this study is skewed to the right (see Figure 1), a finding consistent with prior literature indicating that the population of home health aides tends to be middle-aged women (Montgomery, Holley, Deichert, & Kosloski, 2005; Stone et al., 2017; Weng & Landes, 2017). Mean age was determined for respondents that were not at all likely to leave their job and those that were very or somewhat likely to leave their job (Table 3 – Mean Age). There is a small but statistically significant difference in age between these two groups. Those aides who intend to leave were on average 42 years old versus those who do not intend to leave who are on average 45 years old. This result is consistent directionally with prior literature, as discussed above.

Table 3

Comparison of Mean Age

Factor	Not at All Likely to Leave Job	Very/Somewhat Likely to Leave Job	p-value
Sample N	788	203	<0.001
Sample Age	45.0	41.8	
Std. Dev.	(11.71)	(12.01)	
Full Data Set N	2454	821	<0.001
Full Data Set Age	46.0	44.2	
Std. Dev.	(11.31)	(12.49)	

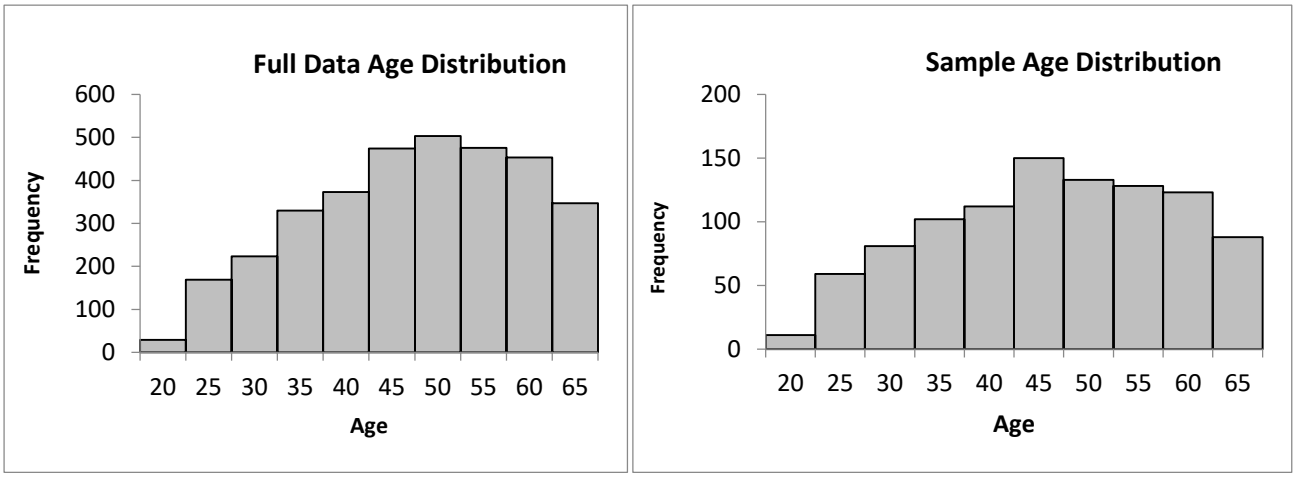

Figure 1. Age Distribution of Full Data Set versus Sample Data Set

Race

The NHHAS questionnaire included three categories for race: African American/Black, White, or Other. There was a separate question for respondents to indicate if they were Hispanic or Latino/Latina. There is no explanation as to why race responses were designed in this way and why, for example, categories for "Hispanic and Asian" were not options. An assumption is made that Hispanic or Latino/Latina responses fit in the "other" category for RACERECODE. That being the case, the sample is 70% White, 20% African American/Black, 10% other.

Table 4

Distribution of Race, Sample and Full Data Set

	Sample			Full Data Set		
Race	**Freq.**	**Percent**	**Cum.**	**Freq.**	**Percent**	**Cum.**
White	691	70.08	70.08	2,391	70.80	70.80
African American/Black	198	20.08	90.16	725	21.47	92.27
Other	97	9.84	100	261	7.73	100.00
Total	986	100		3,377	100	

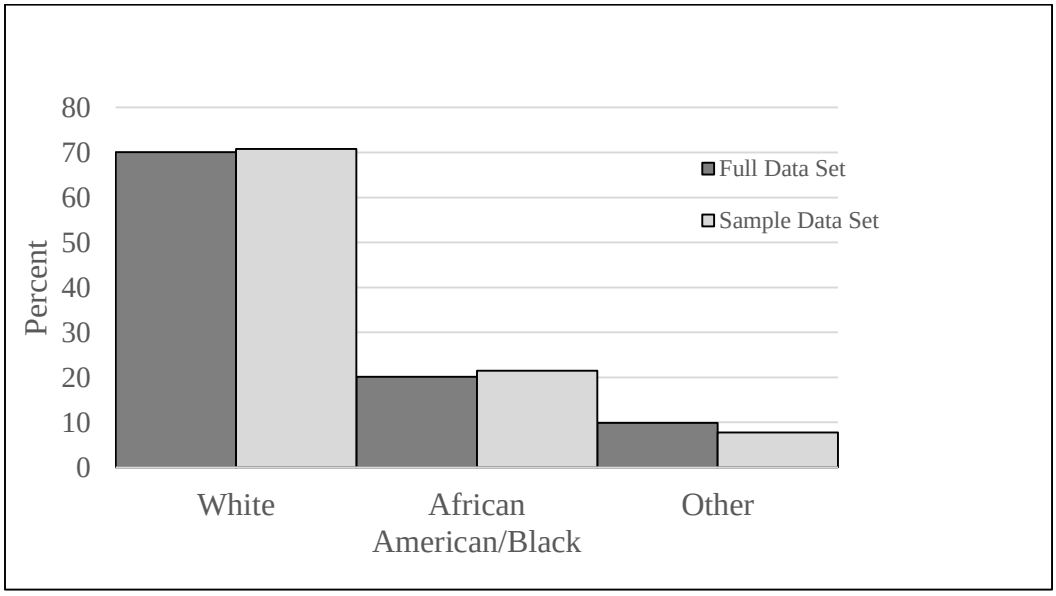

Figure 2. Distribution of Race

Other Demographic Variables

There was no difference between the full and sample data sets for the remaining descriptive demographic variables, except one (Tables 5 to 10 & Figures 3 to 8). The highest percentage of aides in both groups, about 50%, completed high school (Table 5 & Figure 3).

Most aides were married (Table 6 & Figure 4), with a total household income in the past year of between $20,000 and $30,000 (Table 7 & Figure 5). The majority of aides worked at not-for-profit, non-chain affiliated agencies (Tables 9 & 10, Figures 7 & 8). Data from the Centers for Disease Control collected in 2016 showed that 80.6% of home healthcare agencies are for-profit (*FastStats - Home Health Care*, 2019). The NHHAS was conducted between 2007 and 2008. Changes may have occurred within the industry between 2008 and 2016. However, it is more likely that, for some reason, aides employed at for-profit agencies did not participate in the NHHAS to the same extent as aides working for non-profits. This would be consistent with the over-representation of hospice aides in the sample, as discussed below.

There was a difference between the full and sample data sets with regards to agency type. There was an even split between aides working in hospice and mixed agencies (about 36%), with about 30% working in home health agencies in the full data set. In the sample data set, 60% of aides worked for hospice care agencies, 35% worked in mixed agencies, and only 5% indicated that they worked in home health agencies. This is a somewhat unusual demographic. Perhaps employees at for-profit, chain-affiliated agencies were reluctant to participate in the NHHAS, and therefore, not-for-profit, non-chain affiliated agencies were over-represented in the study. The sample data set was created by selecting only aides who worked in patient homes rather than in one or more in-patient facilities or both home and inpatient facilities. The poor representation in the sample of home health aides compared to hospice aides is a limitation of the study. Hospice aides and home health aides receive comparable training, deliver the same type of care, and work remotely, facing similar communication issues.

Table 5

Highest Grade or Year Completed in School

FULL DATA SET	Frequency	Percent	Cumulative Percent	SAMPLE	Frequency	Percent	Cumulative Percent
Don't know	23	0.68	0.68	Don't know	5	0.5	0.5
Refused to answer	4	0.12	0.8	Refused to answer	2	0.2	0.69
Fewer than 12 years	424	12.56	13.36	Fewer than 12 years	100	9.92	10.62
12 years	1,696	50.22	63.58	12 years	498	49.4	60.02
1 year college/trade school	432	12.79	76.37	1 year college/trade school	152	15.08	75.1
2 years college/trade school	520	15.4	91.77	2 years college/trade school	157	15.58	90.67
3 years college or trade school	153	4.53	96.3	3 years college or trade school	50	4.96	95.63
College Graduate	105	3.11	99.41	College Graduate	36	3.57	99.21
Post College	20	0.59	100	Post College	8	0.79	100
Total	3,377	100		**Total**	1,008	100	

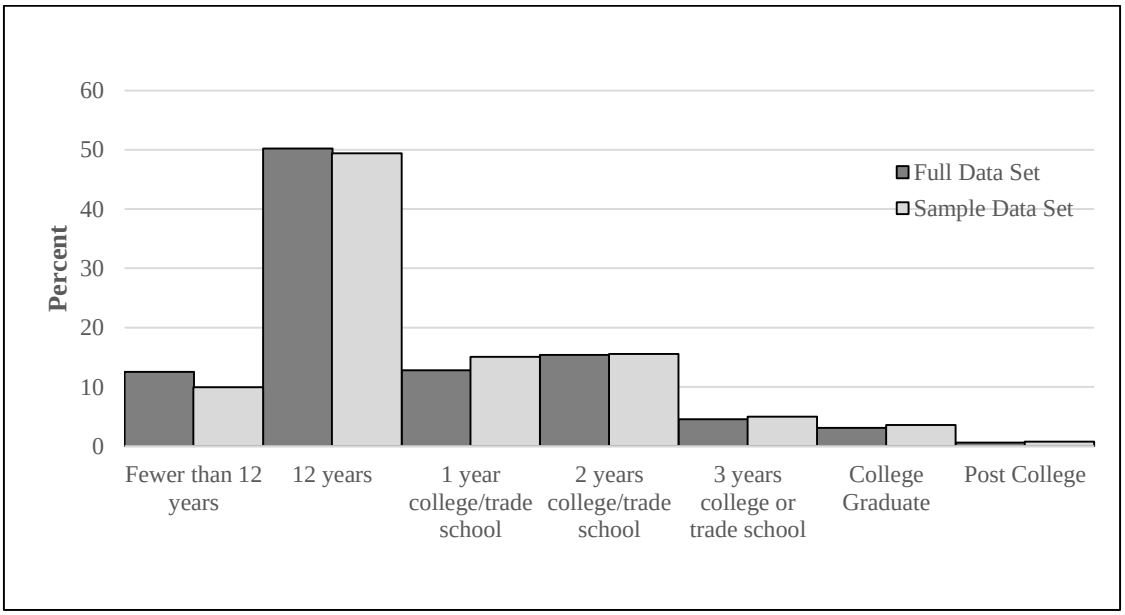

Figure 3. Highest Grade or Year Completed in School

Table 6

Marital Status

FULL DATA SET	Frequency	Percent	Cumulative Percent	SAMPLE	Frequency	Percent	Cumulative Percent
Don't know	22	0.65	0.65	Don't know	5	0.5	0.5
Refused to answer	7	0.21	0.86	Refused to answer	2	0.2	0.69
Married	1,874	55.49	56.35	Married	574	56.94	57.64
Living with Partner	221	6.54	62.9	Living with Partner	67	6.65	64.29
Separated	118	3.49	66.39	Separated	30	2.98	67.26
Divorced	569	16.85	83.24	Divorced	169	16.77	84.03
Widowed	175	5.18	88.42	Widowed	45	4.46	88.49
Never Married	391	11.58	100	Never Married	116	11.51	100
Total	3,377	100		**Total**	1,008	100	

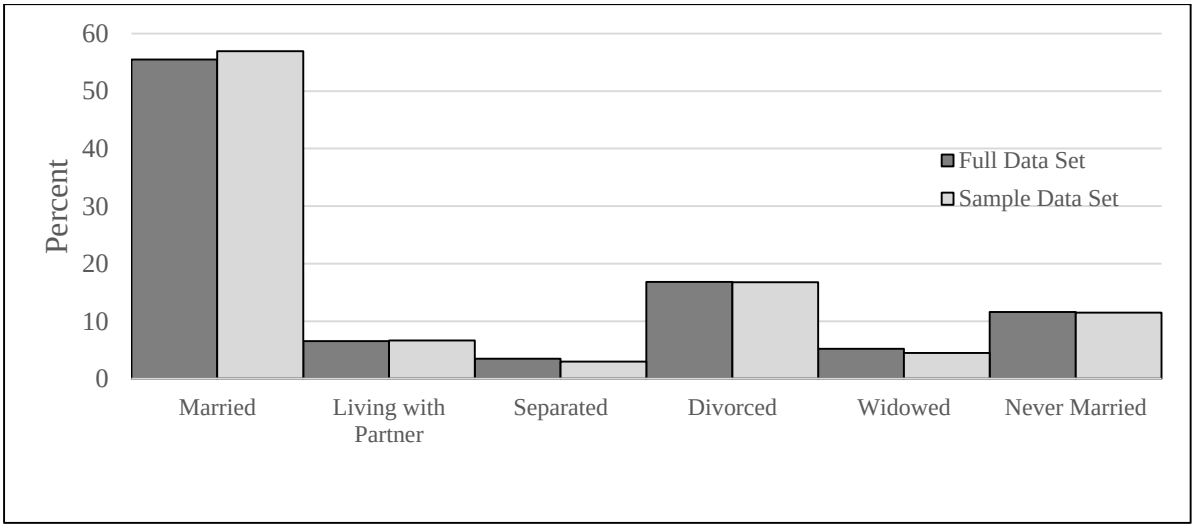

Figure 4. Marital Status

Table 7

Total Household Income in the Past Year

FULL DATA SET	Frequency	Percent	Cumulative Percent	SAMPLE	Frequency	Percent	Cumulative Percent
Don't know	64	1.9	1.9	Don't know	24	2.38	2.38
Refused to answer	63	1.87	3.76	Refused to answer	13	1.29	3.67
Less than $10,000	100	2.96	6.72	Less than $10,000	17	1.69	5.36
$10,000 to $20,000	514	15.22	21.94	$10,000 to $20,000	121	12	17.36
$20,000 - $30,000	906	26.83	48.77	$20,000 - $30,000	288	28.57	45.93
$30,000 to $40,000	642	19.01	67.78	$30,000 to $40,000	189	18.75	64.68
$40,000 to $50,000	430	12.73	80.52	$40,000 to $50,000	137	13.59	78.27
$50,000 to $60,000	273	8.08	88.6	$50,000 to $60,000	96	9.52	87.8
$60,000 to $70,000	153	4.53	93.13	$60,000 to $70,000	45	4.46	92.26
$70,000 to $80,000	100	2.96	96.09	$70,000 to $80,000	34	3.37	95.63
$80,000 or more	132	3.91	100	$80,000 or more	44	4.37	100
Total	3,377	100		**Total**	1,008	100	

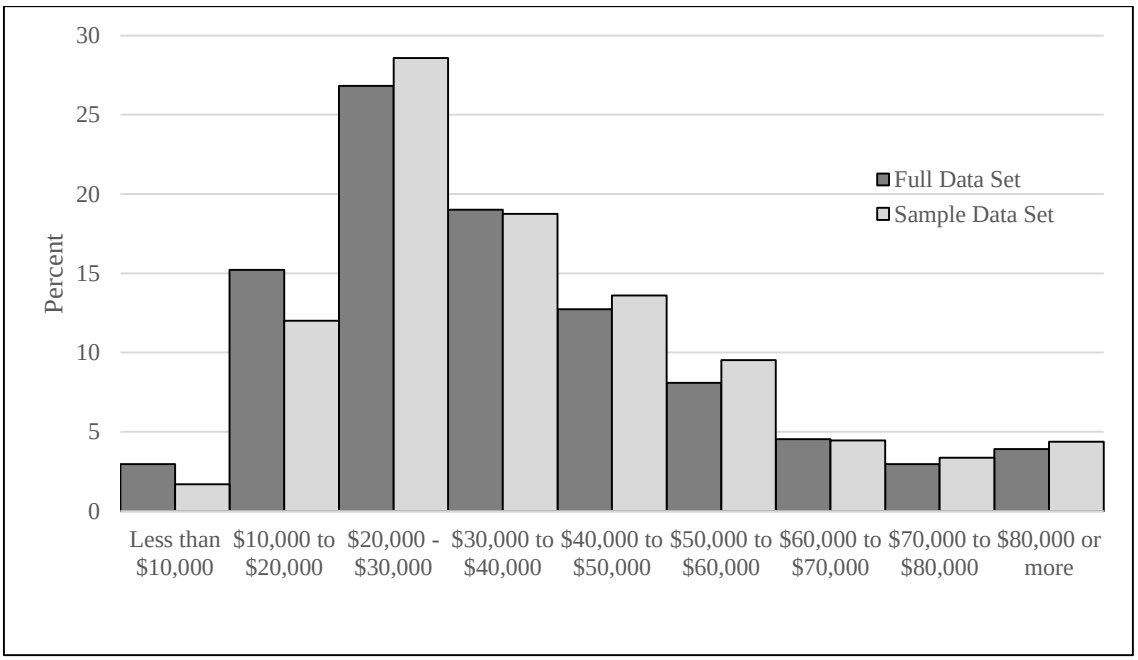

Figure 5. Total Household Income in the Past Year

Table 8

Agency Type

FULL DATA SET	Frequency	Percent	Cumulative Percent	SAMPLE	Frequency	Percent	Cumulative Percent
Don't know	64	1.9	1.9	Home Health	55	5.46	5.46
Home Health	965	28.58	28.58	Hospice	597	59.23	64.68
Hospice	1,203	35.62	64.2	Mixed	356	35.32	100
Mixed	1,209	35.8	100	**Total**	1,008	100	
Total	3,377	100					

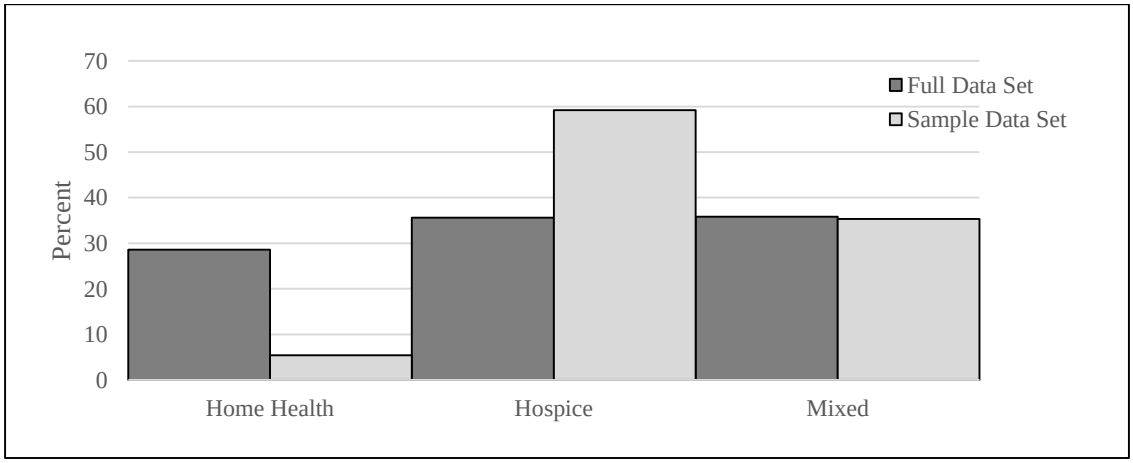

Figure 6. Agency Type

Table 9

Ownership

FULL DATA SET	Frequency	Percent	Cumulative Percent	SAMPLE	Frequency	Percent	Cumulative Percent
For-Profit	1,049	31.06	31.06	For-Profit	294	29.17	29.17
Others	2,328	68.94	100	Others	714	70.83	100
Total	3,377	100		**Total**	1,008	100	

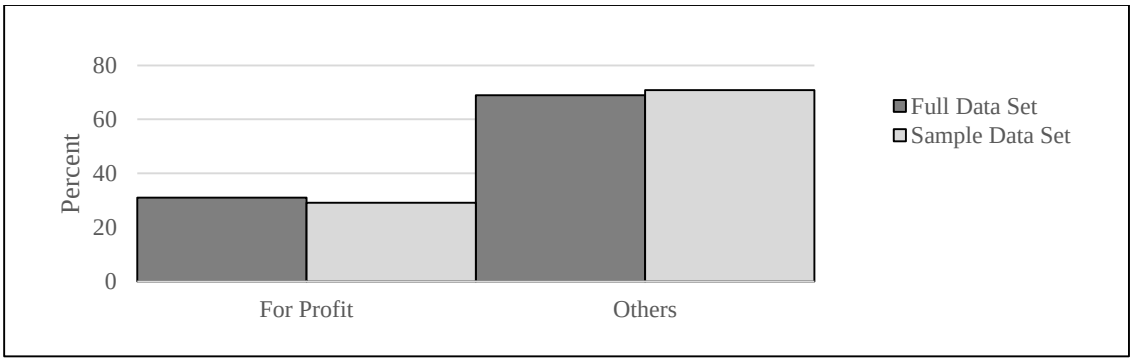

Figure 7. Ownership

Table 10

Chain-Affiliation

FULL DATA SET	**Frequency**	**Percent**	**Cumulative Percent**	**SAMPLE**	**Frequency**	**Percent**	**Cumulative Percent**
Chain	780	23.1	23.1	Chain	216	21.43	21.43
Non-Chain	2,597	76.9	100	Non-Chain	792	78.57	100
Total	3,377	100		**Total**	1,008	100	

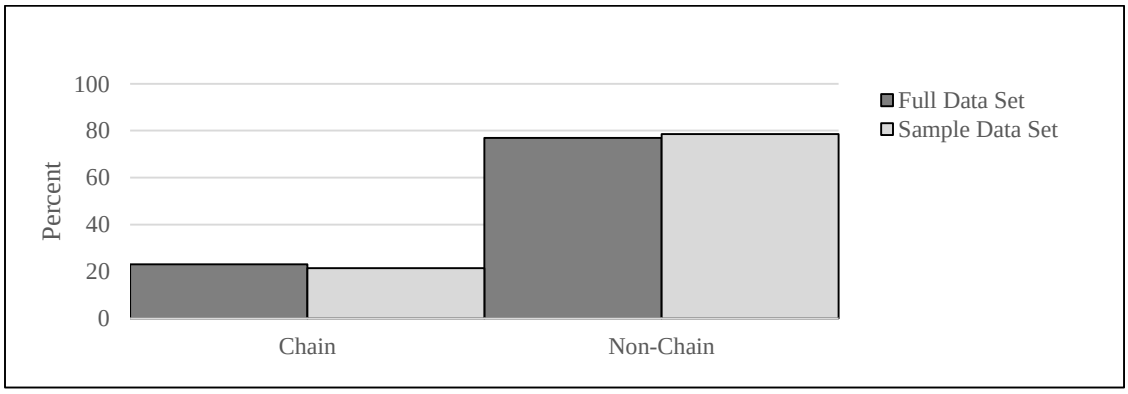

Figure 8. Chain Affiliation

Summary Statistics

Descriptive statistics were performed to understand whether the sample selected for analysis differed from the full data set. Overall, not-for-profit, non-chain agencies were over-represented in the NHHAS database, perhaps due to the unwillingness of for-profit chain agencies to participate in the study. The sample contains a large percentage of aides who indicated that they worked at hospice agencies. This finding is not likely to affect the research analysis due to the similarities in work done by home health and hospice aides.

Statistical tests were done to understand if responses to the independent variable levels are different between respondents who are not at all likely to leave their job versus those who are very or somewhat likely to leave their job. The categorical supervisor variables for the full and sample data sets were analyzed by Chi-Square testing. Proportion tests were done for the dichotomous organizational variables, and a T-test was done for Age. Results can be found in Table 11.

Table 11

Summary Statistics by Intent to Leave Job, Sample and Full Data Set

Factor	Level	Sample Summary Statistics			Full Data Set Statistics		
		Not at All Likely to Leave Job	Very/Somewhat Likely to Leave Job	p-value	Not at All Likely to Leave Job	Very/Somewhat Likely to Leave Job	p-value
N		783	203		2454	821	
SUPCLEAR – My supervisor provides clear instructions when assigning work	1=Strongly agree	625 (79.3%)	131 (64.5%)	<0.001	1912 (77.9%)	501 (61.0%)	<0.001
	2=Somewhat agree	127 (16.1%)	46 (22.7%)		422 (17.2%)	198 (24.1%)	
	3=somewhat disagree	22 (2.8%)	12 (5.9%)		68 (2.8%)	45 (5.5%)	
	4=Strongly disagree	14 (1.8%)	14 (6.9%)		52 (2.1%)	77 (9.4%)	
SUPADVAN - My supervisor is supportive of progress in my career, such as further training.	1=Strongly agree	672 (85.3%)	131 (64.5%)	<0.001	2088 (85.1%)	554 (67.5%)	<0.001
	2=Somewhat agree	99 (12.6%)	49 (24.1%)		303 (12.3%)	183 (22.3%)	
	3=somewhat disagree	10 (1.3%)	13 (6.4%)		36 (1.5%)	43 (5.2%)	
	4=Strongly disagree	7 (0.9%)	10 (4.9%)		27 (1.1%)	41 (5.0%)	
SUPHEAR - My supervisor listens to me when I am worried about my patient's care.	1=Strongly agree	636 (80.7%)	131 (64.5%)	<0.001	1943 (79.2%)	502 (61.1%)	<0.001
	2=Somewhat agree	124 (15.7%)	39 (19.2%)		401 (16.3%)	204 (24.8%)	
	3=somewhat disagree	19 (2.4%)	17 (8.4%)		66 (2.7%)	49 (6.0%)	
	4=Strongly disagree	9 (1.1%)	16 (7.9%)		44 (1.8%)	66 (8.0%)	
SUPTELLS - My supervisor tells me when I am doing a good job.	1=Strongly agree	675 (85.7%)	140 (69.0%)	<0.001	2118 (86.3%)	565 (68.8%)	<0.001
	2=Somewhat agree	94 (11.9%)	47 (23.2%)		278 (11.3%)	187 (22.8%)	
	3=somewhat disagree	8 (1.0%)	6 (3.0%)		27 (1.1%)	26 (3.2%)	

Table 11—Continued

	4=Strongly disagree	11 (1.4%)	10 (4.9%)		31 (1.3%)	43 (5.2%)	
RESPECTS	1=My supervisor respects me a great deal.	673 (85.4%)	135 (66.5%)	<0.001	2072 (84.4%)	538 (65.5%)	<0.001
	2=My supervisor respects me somewhat.	108 (13.7%)	57 (28.1%)		359 (14.6%)	241 (29.4%)	
	3=My supervisor does not respect me at all.	7 (0.9%)	11 (5.4%)		23 (0.9%)	42 (5.1%)	
SUPVALUE	1=My supervisor values and appreciated the work I do as a home health aide very much.	689 (87.4%)	133 (65.5%)	<0.001	2127 (86.7%)	537 (65.4%)	<0.001
	2=My supervisor values or appreciates the work I do as a home health aide somewhat.	92 (11.7%)	61 (30.0%)		308 (12.6%)	248 (30.2%)	
	3=My supervisor does not value at all the work I do as a home health aide.	7 (0.9%)	9 (4.4%)		19 (0.8%)	36 (4.4%)	
CPROBSTF	Aide Communication problems with agency staff	697 (88.6%)	163 (80.3%)	0.002	2201 (89.8%)	675 (82.3%)	<0.001
CPROBHTH	Misinformation from the agency about a patient's health	773 (98.2%)	198 (97.5%)	0.53	2395 (97.8%)	800 (97.6%)	0.75
PROBCOWK	Problems with Coworkers	731 (92.9%)	183 (90.1%)	0.19	2288 (93.4%)	740 (90.2%)	0.003

Table 11—Continued

PROBSUP	Problems with supervisors	759 (96.4%)	179 (88.2%)	<0.001	2361 (96.4%)	717 (87.4%)	<0.001
NOWCWORK	Do you continue to work in your current job because you enjoy working with the other members of your care team?	169 (21.5%)	57 (28.1%)	0.046	593 (24.2%)	283 (34.5%)	<0.001
NOWSUP	Do you continue to work in your current job because you enjoy working with your supervisor?	272 (34.6%)	80 (39.4%)	0.20	820 (33.5%)	343 (41.8%)	<0.001
RACERECODE	1=White	578 (73.4%)	117 (57.6%)	<0.001	1818 (74.1%)	508 (61.9%)	<0.001
	2=African American, Black	137 (17.4%)	62 (30.5%)		454 (18.5%)	244 (29.7%)	
	3=Other	73 (9.3%)	24 (11.8%)		182 (7.4%)	69 (8.4%)	

Sample Data Set Results

A total of 783 respondents indicated that they did not intend to leave their job in the coming year versus 203, who stated that they did intend to leave their job in the coming year. The distribution of answers between those who did and did not intend to leave their jobs was significantly different for all but three of the independent variables, CPROBHTH, "Misinformation from the agency about a patient's health," PROBCOWK, "Problems with coworkers," and NOWSUP, "Do you continue to work in your current job because you enjoy working with your supervisor?"

For all supervisor variables, there was a significant difference in responses between the two groups. A smaller percentage of aides who intended to leave their job (64%) versus those who did not intend to leave their job (79.3%) responded that they strongly agreed that their supervisor provided clear instructions when assigning work, that their supervisor was supportive of progress in their career (64.5% and 85.4% respectively), listened to them when they were worried about a patient's care (64.5% versus 80.8%), and told them that they were doing a good job (69% versus 85.7%). When responding to whether their supervisor respected them a great deal as part of the healthcare team, 66.5% of aides who intended to leave their job agreed with this statement versus 85.4% of aids who did not intend to leave. The numbers are nearly the same for whether an aide felt their supervisor valued and appreciate the work they did very much (65% versus 87.5%, respectively).

There was a significant difference in how those who intend to leave versus those who did not intend to leave responded to whether they had communication problems with the staff (80.3% and 88.6%). The difference between them was not as great as with other variables and the majority of both groups agreed that this was an issue in their jobs.

There was no statistically significant difference in the responses to whether aides had received misinformation from the agency about a patient's health. Nearly 100% of each group indicated that this was a problem.

Over 90% of aides in both groups acknowledged that they had problems with coworkers. There was no statistically significant difference between the two groups. However, there was a statistically significant difference in responses to problems with a supervisor, although the percentages were high for both groups. Unexpectedly a higher percentage of those who intended to stay (96.4%) versus those who intended to leave (88.2%) responded that they experienced problems with their supervisors.

While there was a statistically significant difference between groups in whether they continued to work at their current job because they enjoyed working with their care team, less than a third of each group indicated this as a reason to continue at the current job. However, a greater percentage of aides in the intent to leave group (28%) versus those who did not intend to leave (21.6%) said that enjoying other care team members was a reason to continue at their current job.

There was no statistically significant difference between the groups in response to whether they continued to work at their current job because they enjoy working with their supervisor. Fewer than 40% of each group indicated that they worked in their current job because they enjoyed working with their supervisor.

Full Data Set Results

A total of 2,454 respondents indicated that they did not intend to leave their job in the coming year versus 821, who stated that they did intend to leave their job in the coming year.

The distribution of answers between those who did and did not intend to leave their jobs was significantly different for all but one of the independent variables, CPROBHTH, "Misinformation from the agency about a patient's health."

For all supervisor variables, there was a significant difference in responses between the two groups. A smaller percentage of aides who intended to leave their job (61.0%) versus those who did not intend to leave their job (77.9%) responded that they strongly agreed that their supervisor provided clear instructions when assigning work, that their supervisor was supportive of progress in their career (67.5% and 85.1% respectively), listened to them when they were worried about a patient's care (61.1% versus 79.2%), told them that they were doing a good job (68.8% versus 86.3%). When responding to whether their supervisor respected them a great deal as part of the healthcare team, 65.5% of aides who intended to leave their job agreed with this statement versus 84.4% of aids who did not intend to leave. The numbers are nearly the same for whether an aide felt their supervisor valued and appreciate the work they did very much (65.4% versus 86.7%, respectively).

While there was a significant difference in how those who intend to leave versus those who did not intend to leave responded to whether they had communication problems with the staff (82.3% and 89.8%), the difference between them was not as great as with other variables. The majority of both groups agreed that this was an issue in their jobs.

There was no statistically significant difference in the responses to whether aides had received misinformation from the agency about a patient's health. Nearly 100% of each group indicated that this was a problem.

Over 90% of aides in both groups acknowledged that they had problems with coworkers. There was a statistically significant difference between the two groups. There was also a

statistically significant difference in responses to problems with a supervisor, although the percentages were high for both groups. Unexpectedly a higher percentage of those who intended to stay (96.4%) versus those who intended to leave (87.4%) responded that they experienced problems with their supervisors.

While there was a statistically significant difference between groups in whether they continued to work at their current job because they enjoyed working with their care team, less than a third of each group indicated this as a reason to continue at the current job. However, a greater percentage of aides in the intent to leave group (34.5%) versus those who did not intend to leave (24.2%) said that enjoying other care team members was a reason to continue at their current job.

There was a statistically significant difference between the groups in response to whether they continued to work at their current job because they enjoy working with their supervisor. Surprisingly, 41.8% of those in the intent to leave group versus 33.5% of those not intending to leave indicated that they worked in their current job because they enjoyed working with their supervisor.

Variance Inflation (VIF) Test for Multicollinearity

A VIF test was done to calculate the variance inflation factors for the independent variables (see results in Table 19 in Appendix II). VIF values of 1 show that the variables are not correlated. Values between 1 and 5 indicate a moderate correlation, and values greater than 5 demonstrate a high correlation level (*What are Variance Inflation Factors (VIFs)? | Displayr.com*, 2018). In all cases, the VIF values were between 1 and 2. Therefore, there is not an issue with multicollinearity in this sample.

Logistic Regressions

The purpose of the logistic regression analysis was to determine which independent variables affect the probability of a home health aide intending to leave or not leave their job. Three equations are postulated for estimating the probability that a home health aide would intend to leave their job. The base case includes a small but important subset of the supervisor variables. The second equation includes all variables related to supervisor communications. The third equation encompasses all variables from the NHHAS that reference the supervisor and organizational and two control variables. The equations are below with the results of the regressions in Tables 5, 6, and 7.

Base Supervisor Variables Regression (for variable definitions, see Table 2)

$$LEAVEJOB_i = \beta_0 + \delta\, SUPCLEAR_i + \delta\, SUPADVAN_i + \delta\, SUPHEAR_i + \delta\, SUPTELLS_i + \varepsilon_i$$

All Supervisor Variables Regression

$$LEAVEJOB_i = \beta_0 + \delta\, SUPCLEAR_i + \delta\, SUPADVAN_i + \delta\, SUPHEAR_i + \delta\, SUPTELLS_i + \delta\, RESPECTS_i + \beta_1 \mathrm{NOWSUP}_i + \beta_2 PROBSUP_i + \delta\, SUPVALUE_i + \varepsilon_i$$

Full Regression

$$LEAVEJOB_i = \beta_0 + \delta\, SUPCLEAR_i + \delta\, SUPADVAN_i + \delta\, SUPHEAR_i + \delta\, SUPTELLS_i + \delta\, RESPECTS_i + \delta\, SUPVALUE_i + \delta\, ORGVALUE_i + \beta_1 \mathrm{CPROBSTF}_i + \beta_2 \mathrm{CPROBHTH}_i + \beta_3 \mathrm{PROBCOWK}_i + \beta_4 PROBSUP_i + \beta_5 \mathrm{NOWCWORK}_i + \beta_6 \mathrm{NOWSUP}_i \delta + AGE_i + \delta\, RACERCODE_i + \varepsilon_i$$

Table 12

Regression Results - Base Supervisor Variables

	(1) OLS	(2) LOGIT	(3) MFX
SUPCLEAR=2	0.00350	0.0146	0.00230
	(0.0406)	(0.253)	(0.0399)
SUPCLEAR=3	-0.0721	-0.389	-0.0539
	(0.0903)	(0.500)	(0.0618)
SUPCLEAR=4	0.00284	-0.0187	-0.00291
	(0.132)	(0.680)	(0.105)
SUPADVAN=2	0.123**	0.690**	0.120**
	(0.0439)	(0.229)	(0.0442)
SUPADVAN=3	0.314**	1.502**	0.309*
	(0.116)	(0.522)	(0.128)
SUPADVAN=4	0.221	1.085	0.207
	(0.140)	(0.625)	(0.144)
SUPHEAR=2	0.00605	0.0490	0.00737
	(0.0395)	(0.242)	(0.0367)
SUPHEAR=3	0.183	0.885	0.168
	(0.0985)	(0.452)	(0.100)
SUPHEAR=4	0.332**	1.498**	0.316*
	(0.122)	(0.566)	(0.139)
SUPTELLS=2	0.0738	0.421	0.0715
	(0.0483)	(0.264)	(0.0482)
SUPTELLS=3	0.0325	0.186	0.0295
	(0.160)	(0.737)	(0.123)
SUPTELLS=4	-0.0187	-0.0396	-0.00585
	(0.133)	(0.644)	(0.0941)
Constant	0.151***	-1.718***	
	(0.0140)	(0.104)	
Observations	991	991	991
R^2	0.079		
Adjusted R^2	0.068		
Pseudo R^2		0.065	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.00$

Table 13

Regression Results - Full Set of Supervisor Variables

	(1) OLS	(2) LOGIT	(3) MFX
SUPCLEAR=2	-0.0248	-0.162	-0.0247
	(0.0404)	(0.265)	(0.0392)
SUPCLEAR=3	-0.113	-0.623	-0.0817
	(0.0961)	(0.531)	(0.0578)
SUPCLEAR=4	-0.0872	-0.453	-0.0629
	(0.134)	(0.668)	(0.0805)
SUPADVAN=2	0.106*	0.601**	0.102*
	(0.0440)	(0.233)	(0.0437)
SUPADVAN=3	0.266*	1.275*	0.253
	(0.120)	(0.571)	(0.137)
SUPADVAN=4	0.175	0.871	0.159
	(0.142)	(0.638)	(0.139)
SUPHEAR=2	-0.0253	-0.139	-0.0201
	(0.0417)	(0.264)	(0.0372)
SUPHEAR=3	0.125	0.572	0.102
	(0.0945)	(0.443)	(0.0892)
SUPHEAR=4	0.266*	1.174*	0.239
	(0.122)	(0.573)	(0.137)
SUPTELLS=2	0.0435	0.260	0.0426
	(0.0509)	(0.287)	(0.0495)
SUPTELLS=3	-0.0239	-0.0925	-0.0136
	(0.162)	(0.753)	(0.108)
SUPTELLS=4	-0.0749	-0.334	-0.0454
	(0.129)	(0.605)	(0.0740)
RESPECTS=2	0.0391	0.220	0.0351
	(0.0504)	(0.280)	(0.0465)
RESPECTS=3	0.185	0.927	0.178
	(0.199)	(0.934)	(0.213)
NOWSUP	0.00735	0.0492	0.00758
	(0.0260)	(0.173)	(0.0267)
PROBSUP	-0.106	-0.537	-0.0827
	(0.0816)	(0.376)	(0.0581)
SUPVALUE=2	0.133*	0.709**	0.126*
	(0.0523)	(0.266)	(0.0528)
SUPVALUE=3	-0.000936	0.0298	0.00432
	(0.186)	(0.872)	(0.128)
Constant	0.248**	-1.248**	
	(0.0824)	(0.388)	

Table 13—Continued

Observations	988	988	988
R^2	0.097		
Adjusted R^2	0.080		
Pseudo R^2		0.081	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 14

Regression Results - Full Set of Variables

	(1) OLS	(2) LOGIT	(3) MFX
SUPCLEAR=2	-0.0344	-0.234	-0.0337
	(0.0390)	(0.269)	(0.0371)
SUPCLEAR=3	-0.107	-0.687	-0.0853
	(0.0936)	(0.570)	(0.0572)
SUPCLEAR=4	-0.213	-1.235	-0.128**
	(0.129)	(0.747)	(0.0492)
SUPADVAN=2	0.0876*	0.486*	0.0766
	(0.0424)	(0.243)	(0.0420)
SUPADVAN=3	0.275*	1.372*	0.269
	(0.119)	(0.655)	(0.158)
SUPADVAN=4	0.175	0.967	0.174
	(0.146)	(0.732)	(0.161)
SUPHEAR=2	-0.0304	-0.167	-0.0226
	(0.0412)	(0.272)	(0.0355)
SUPHEAR=3	0.139	0.709	0.125
	(0.0953)	(0.479)	(0.0985)
SUPHEAR=4	0.256*	1.320*	0.266
	(0.116)	(0.617)	(0.149)
SUPTELLS=2	0.0365	0.288	0.0453
	(0.0490)	(0.290)	(0.0484)
SUPTELLS=3	-0.102	-0.598	-0.0703
	(0.144)	(0.669)	(0.0637)
SUPTELLS=4	-0.0819	-0.494	-0.0602
	(0.127)	(0.636)	(0.0655)
RESPECTS=2	0.0246	0.139	0.0208
	(0.0487)	(0.284)	(0.0435)

Table 14—Continued

	(1) OLS	(2) LOGIT	(3) MFX
RESPECTS=3	0.121	0.704	0.124
	(0.207)	(1.134)	(0.235)
SUPVALUE=2	0.0579	0.285	0.0446
	(0.0543)	(0.296)	(0.0491)
SUPVALUE=3	-0.164	-0.783	-0.0857
	(0.181)	(1.005)	(0.0822)
ORGVALUE=2	0.131***	0.825***	0.134***
	(0.0394)	(0.222)	(0.0401)
ORGVALUE=3	0.544***	2.853***	0.601***
	(0.122)	(0.796)	(0.150)
CPROBSTF	-0.0429	-0.302	-0.0441
	(0.0413)	(0.247)	(0.0360)
CPROBHTH	0.0303	0.162	0.0236
	(0.0874)	(0.546)	(0.0798)
PROBCOWK	0.0343	0.227	0.0332
	(0.0500)	(0.331)	(0.0484)
PROBSUP	-0.152	-0.818*	-0.119*
	(0.0828)	(0.400)	(0.0585)
NOWCWORK	0.0291	0.203	0.0297
	(0.0302)	(0.204)	(0.0297)
NOWSUP	0.00210	0.00235	0.000343
	(0.0256)	(0.182)	(0.0266)
Age	-0.00222*	-0.0168*	-0.00246*
	(0.00107)	(0.00775)	(0.00113)
RACERECODE=2	0.130***	0.848***	0.142***
	(0.0348)	(0.205)	(0.0384)
RACERECODE=3	0.0342	0.278	0.0390
	(0.0431)	(0.296)	(0.0446)
Constant	0.319*	-0.751	
	(0.136)	(0.807)	
Observations	987	987	987
R^2	0.159		
Adjusted R^2	0.135		
Pseudo R^2		0.140	

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Two variables in the Base Supervisor regression demonstrate a statistically significant relationship to intent to leave. SUPADVAN – "My supervisor is supportive of progress in my career such as further training," and SUPHEAR – "My supervisor listens to me when I am worried about my patient's care."

Two variables in the Full Supervisor regression demonstrate a statistically significant relationship to intent to leave - SUPADVAN and SUPVALUE – "My supervisor values or appreciates the work I do as a home health aide."

Two variables in the Full regression demonstrate a statistically significant relationship to intent to leave - SUPADVAN and ORGVALUE – "My organization values or appreciates the work I do as a home health aide."

Table 15

Comparison of Regression Results – Marginal Effects

	SUPADVAN	**SUPHEAR**	**SUPVALUE**	**ORGVALUE**	**Pseudo R^2**
Base Supervisor Regression	Significant	Significant	NS*	NS	0.065
Full Supervisor Regression	Significant	NS	Significant	NS	0.081
Full Regression	Significant	NS	NS	Significant	0.140

*NS denotes "Not significant."

Base Supervisor Variables Regression

Those aides who "somewhat agree" rather than strongly agree that their supervisor is supportive of their career progression (SUPADVAN) are 12.3 percentage points more likely to intend to leave their job. This effect is more pronounced for aides who responded that they

"somewhat disagree" that their supervisor is supportive of their career progression. Aides selecting option 3 were 30.6 percentage points more likely to leave their job than those who strongly agreed.

Aides who strongly disagreed - option 4 - that their supervisor listens to them when they are worried about their patient's care (SUPHEAR) were 31.3 percentage points more likely to leave their job than those who strongly agreed with this statement.

Full Supervisor Variables Regression

When the additional supervisor variables are added to the regression model, the coefficients that are significant change. Aides who somewhat agree that their supervisor is supportive of their career progression (SUPADVAN) are 10.2 percentage points more likely to intend to leave their jobs than those who strongly agreed. Aides who somewhat agree that their supervisor values or appreciates their work as an aide (SUPVALUE) are 12.6 percentage points more likely to leave their job than those who strongly agree with this statement.

Full Regression

When the age and race control variables are included in the full regression, coefficients change. SUPADVAN and SUPHEAR demonstrate a statistically significant relationship to intent to leave, but the effect is modulated. Aides who responded that they "somewhat agree' that their supervisor was supportive of progress in their career (SUPADVAN) were 9 percentage points more likely to intend to leave their job than aides who strongly agreed with this statement.

Aides who strongly disagreed that their supervisor listens to them when they are worried about their patient's care (SUPHEAR) were 25.6 percentage points more likely to leave their job than those who strongly agreed with this statement.

In OLS regression, r-squared values indicate how well the regression model explains the variance between the dependent and independent variables. If an r-squared value approaches one, the regression model is said to do an excellent job of explaining changes in the dependent variable based on changes in the independent variables.

Unfortunately, there is no corresponding statistic in logistic regression that allows such a simple interpretation of the regression model. There is little consensus among statisticians about the best statistic to interpret logistic regression models. However, the "pseudo-r-squared" is the easiest to understand for discussing this study's results. Logistic regression models are fitted using the method of "maximum likelihood. The parameter estimates are those values that maximize the likelihood of the observed data (Bartlett, 2014). Unlike OLS regression r-squared values, the pseudo-r-square does not necessarily have a value between 0 and 1. Pseudo-r-squared values are relative measures among similar models indicating how well the model explains the data (*R Handbook: p-values and R-square Values for Models*, n.d.). Therefore, it is difficult to say whether a specific pseudo-r-squared value is "good." In this study, the pseudo-r-squared values increase as variables are added to the three models – from 0.065 for the first regression, to 0.085 in regression two, to 0.140 in model three. The conclusion is that the collection of independent variables in model three explains the most variance in HHA's intent to leave and is the best model of the three.

Data Analysis Summary

Two variables in each regression were significantly correlated to intent to leave. SUPADVAN was consistently inversely correlated with intent to leave in all models. However, the second variable was different in each of the three regressions. In the base regression, SUPHEAR was significantly inversely correlated with intent to leave. In the regression using the full set of variables, SUPVALUE was significant, while in the full regression, the significant second variable was ORGVALUE. Based on the pseudo-r-squared values, model three, which includes all independent variables and the control variables age and race, explains HHA's intent to leave better than the other two models.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

Chapter 5 will summarize the study framework, how the data analysis addresses the research questions, and provide an interpretation of the study in the context of the literature. This research examined supervisor communication in the home health aide population and the role communication plays in HHA intent to leave. Variables from data collected in the National Home Health Aide survey that were analogous to communication processes defined in healthcare communication literature were analyzed to determine factors affecting home health aide's intent to leave. The most important of the twelve variables analyzed was, "My supervisor is supportive of progress in my career, such as further training." The concept of "progress in my career" may be interpreted differently by aides, agencies, and policymakers. While "further training" was a qualifier in the question, the expected outcome of further training was not identified. There are no universally accepted training standards in home health care. Each state has its own requirements, which are quite general, and the content of training varies by the provider. Also, no career ladders have been identified for the home healthcare aide population. The notion of a "highly trained home health aide" as a stepping-stone to increased responsibility and higher wages and benefits has previously been explored in the New York state (Osterman, 2017). However, resistance to expanded home health aide responsibilities, primarily from nurses' associations, effectively halted implementation. Federal and State policies are required to

maximize the contributions of HHAs through standardized training and job responsibilities. This is discussed in detail in Chapter 5.

Three other variables were statistically significantly related to intent to leave, depending on the mix of independent variables analyzed. In the base regression, "My supervisor listens to me when I am worried about my patient's care" was significantly inversely correlated with intent to leave. In the regression using the full set of supervisor variables, "My supervisor appreciates and values my work" was significant, while in the full regression, "My organization values or appreciates my work" showed a statistically significant inverse correlation with intent to leave. The independent variables describe interactions with HHAs primarily initiated by the supervisor and point to prioritizing supervisor training. A finding that transcends the authority of supervisors and home health care agencies is the need to develop a universal career path for home health aides. Recommendations are made for home healthcare agency future practices and new state and federal policies to effect broader change in the role of home health aides.

The importance of this study is to provide researchers with an additional avenue of investigation for examining factors that affect job satisfaction and intent to leave among HHAs. Findings in healthcare communication research in the nursing and CNA populations provide concepts that may allow developing a communication model in the home care environment to decrease turnover when holistically implemented. From a practical standpoint, this research provides home healthcare agencies with information that can be readily incorporated into training programs to address urgent staff development needs among supervisors. Recommendations for future research in this area are provided.

Chapter 5 will conclude with a discussion of nursing homes' issues during the coronavirus pandemic, which illuminates the need for regulators to place more emphasis on the availability of home and community-based care for the elderly.

Study Framework and Research Questions and Hypotheses

This study seeks to link the job-demands-control-support model adapted by Wilhelm to study HHA job satisfaction and intent to leave, with a model of job satisfaction and intent to leave developed by Apker et al. (2009) based on organizational communication theory.

This study was conducted to answer the following two research questions:

1. What is the effect of organizational communication variables on home healthcare aide's intention to leave their job in the coming year?
2. What supervisor variables affect whether a home healthcare aide intends to leave their job in the coming year?

The independent variables were analyzed in three separate logistic regressions to explore the effect of different subsets of the independent variables on HHA's intent to leave. The following hypotheses were tested.

H1: There is a statistically significant inverse relationship between one or more Base Supervisor Communication Variables (SUPCLEAR; SUPADVAN; SUPHEAR; SUPTELLS; PROBSUB; NOWSUP; RESPECTS; SUPVALUE) and a home health aide intending to leave their job in the coming year.

H2: There is a statistically significant inverse relationship between one or more Full Supervisor Communication Variables (SUPCLEAR; SUPADVAN; SUPHEAR; SUPTELLS;

PROBSUB; NOWSUP; RESPECTS; SUPVALUE) and a home health aide intending to leave their job in the coming year.

H3: There is a statistically significant inverse relationship between one or more organizational communication variables and control variables (SUPCLEAR; SUPADVAN; SUPHEAR; SUPTESLLS; PROBSUP; NOWSUP; RESPECTS; SUPVALUE; NOWCWORK; ORGVALUE; AGE; RACERCODE) and a home health aide's intent to leave their job in the coming year.

The study data supports all three hypotheses. Regression model three explained the most variance in home health aides' intent to leave. Four independent variables having an inverse relationship with intent to leave were statistically significant: my supervisor is supportive of progress in my career, such as further training; my supervisor listens to me when I am worried about a patient's care; my supervisor values or appreciates the work I do as a home health aide; and my organization values or appreciates the work I do as a home health aide. Intent leave decreases as aides' responses to the independent variables are more affirmative. Aides who agree more strongly with the independent variable statements will be less likely to intend to leave their job in the coming year.

The study results are consistent with prior literature. Home health aides want a job that offers advancement opportunities, and training is viewed as a path to career progression. Benijamali, Jacoby, and Hagopian (2014) found that the primary reason aides provided for leaving the home care profession was the desire to obtain additional training that would lead to a better job. Feldman, Ryvicker, Evans, and Barron (2019) showed that retention of home health aides was greatly improved by participation in a grant-funded program that provided training and mentoring to home health workers. Stone and Bryant (2019) and Osterman (2017) have argued

that HHAs' desire for skills training is a means to enrich their jobs, gain a greater sense of control over their job and obtain higher levels of responsibility.

Literature from multiple disciplines has highlighted the criticality of a supervisor's role and organizational characteristics in a worker's intent to leave. Analysis of NHHAS data has shown that feeling valued by one's organization is significantly inversely related to intent to leave (Wilhelm et al. 2015 and Stone et al. 2017). Yoon, Probst, and DiStefano (2015) analyzed the NHHAS data and found that organization and supervisor support weaken the effect of job stress on job satisfaction, and that supportive supervision resulted in aides viewing their jobs more positively which led to greater work commitment and higher job satisfaction.

This dissertation research points to the utility of integrating the job-demands and controls support model with communication theory.

Theoretical Implications of the Research

This research found that the most important factor that reduces aides' intent to leave was a supervisor who supports an aide's career progress and further training. The more an aide experiences supervisor support for their career progression and training, the lower an aides' intent to leave. Other variables significant in reducing intent to leave include a supervisor who actively listens to an aide's concerns about patient care and aides feeling valued by the supervisor and organization. These results indicate that the relationship between a supervisor and aide and how supervisors communicate with aides is a critical influence in the eventual turnover of remote workers. This result might be explained by the supervisor being an aide's primary link to their employer in a job that is inherently isolating. Aides are not as concerned with an organizational environment they rarely encounter. From the aide's point of view, the supervisor

is the organization. Fostering an aide's attachment to supervisors rather than to organizations may be the key to reducing intent to leave in remote direct care work situations. Communication processes are crucial tools in such an effort.

As adapted by Wilhelm et al. (2015), the Job-Demands-Control-Support model formed the theoretical basis for analyzing the supervisor and organizational variables in this study. The current research goal was to enhance aspects of the perceived workplace characteristics dimension of the Wilhelm model. Results indicate the need to add a dimension to the Wilhelm model called "Supervisor Attachment" (see Figure 9). The subheadings define communicative processes from the health communication literature that were found to increase organizational attachment. Over time research should be carried out to refine the processes to those relevant to supervisor attachment in the home health care environment. Associated with this is the need to consider communicative processes that foster a team-based environment in home health care. The recommendations below will discuss integrating better-trained home health aides into care teams which presents unique challenges for a remote workforce.

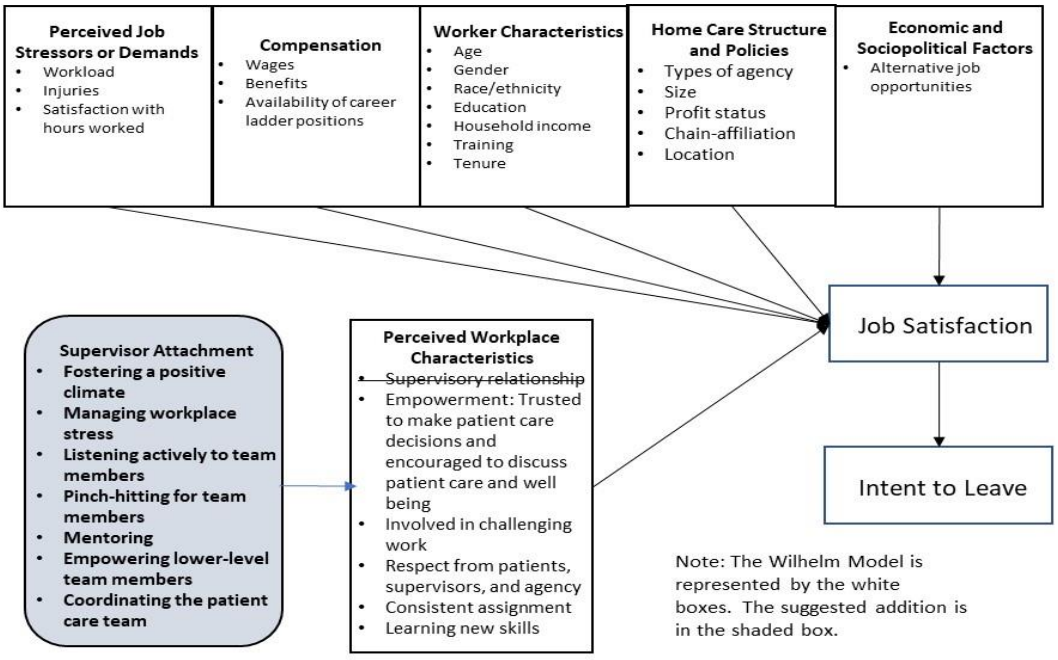

Figure 9. Adapted Wilhelm Job-Demands-Control-Support Model

The results of this study provide evidence for a new avenue of home health aide job satisfaction and intent to leave research—namely, the effect of supervisor communication in the creation of supervisor attachment. The attractive aspect of such research is that findings can readily be integrated into home healthcare agencies through inexpensive training. Supervisors are the critical resource to reducing staff turnover by making changes in how they interact with their aides. But they must be better trained.

The second part of the equation for reducing aide turnover identified in this research is career progression and skill competency training for aides. Mentoring by supervisors may help increase aide job satisfaction, but moving the needle on new aide recruitment and retention will require much broader cooperation between industry, legislatures, and regulators. This is discussed in detail below.

Strengths and Limitations of the Study

This research study in home health care communications examines the relevance of communication processes in home health aides' intent to leave. The NHHAS was not designed to draw firm conclusions about the effect of communications in the home healthcare setting. The variables analyzed were taken directly from the NHHAS database, but they were analogized with communication variables developed to study communication among hospital-based nursing staff. While the field of healthcare communications is broad, the work environments of home health aides and nurses working in a hospital setting are quite different, as is the average educational attainment between the two populations.

The over-representation of hospice aides is a limitation to the generalizability of the study results. While the duties of hospice aides who provide home care are similar to home health aides, the patients are not the same. Hospice patients are not expected to live for more than six months, and therefore, hospice aides' attitudes about their work may be different. Also, the skills training needed and the support desired from a supervisor might be distinct for aides who care for terminally ill patients.

Data from the NHHAS study was collected from 2007 to 2008 and is therefore over a decade old. Much has changed demographically, socially, in the home care industry, how healthcare is delivered, the use of technology such as smart devices, and with CMS's oversight and reimbursement over this time period. It is possible that the responses by aides in 2020 would be different from those in 2007.

The principal strength of the data used in this study is that it represents a national sample of home health aides. The NHHAS was a large, expensive study that surveyed a population that is difficult from a practical standpoint to access due to the remote work environment of HHAs as

well as the large annual turnover. It is hard to imagine an academic researcher with the resources necessary to collect such an extensive amount of data.

Recommendations for Future Research

The role of communication as a distinct factor in home healthcare intent to leave has not been studied and is deserving of the rational development of a set of communication variables specifically suited to the home care environment. Further research on the applicability of healthcare communication research and workforce literature to the home healthcare environment would be a necessary precursor to developing a suitable set of communication variables.

Additional research is needed to describe further how supervisors in the home care business use communication processes in their interactions with aides who have little contact on a day-to-day basis with a "home office."

An interesting literature survey to carry out would be a comprehensive examination of the similarities and differences between aides who work in-home care, nursing homes, hospice care, and hospitals, and factors that affect job satisfaction and intent to leave. This information might inform whether providing training that converges these roles would result in a population of nursing aides who are interchangeable between healthcare settings, potentially providing career opportunities and geographical portability for aides.

The NHHAS study has provided invaluable insight into the home health aide population. Given the increasingly urgent need for home care resources, it would be advisable for the CMS to sponsor another national-level study of long-term care aides to gather updated information on demographics, attitudes, and intentions. This would provide regulators, policymakers, industry leaders, and academics with a fresh understanding of this critical workforce.

Given the apparent importance of career progression and training to HHAs, a survey seeking more specific information about how this population defines "career progression" would be beneficial. Also, various training content options could be tested with HHAs to provide specific insight into the training structure. The study should include measurements of how various career progression types and training would affect job satisfaction and intent to leave. Although it might be challenging to define a suitable study population, it would be helpful to develop several job descriptions for an advanced home health aide to survey potential entrants into the field to see how likely these individuals would be to pursue a career based on the model jobs.

Implications for Future Practice

This research indicates that four of the twelve communication factors analyzed in this model are inversely correlated with intent to leave. HHAs desire more supervisor support for career progression and training, want supervisors who listen to their concerns about patient care, and by extension, take their concerns seriously, and want to be valued by their supervisor and employer. These results suggest two types of training could impact HHA's intent to leave and perhaps lower turnover – skills training for workers and communication and support training for supervisors.

An important outcome of this study is understanding that HHAs have a strong desire to increase their technical skills and improve proficiency in patient care tasks. The NHHAS survey question pertinent to this topic links training and career progression ("My supervisor is supportive of progress in my career, such as further training."). However, there is no specificity for what is meant by career progression in the HHA work environment and whether HHAs

assume a link between training and career progression. For example, does career progression mean the availability of more challenging work that results in higher pay and better benefits, does it mean greater authority or a supervisory role, or the ability to perform more complex tasks? A better understanding of what constitutes career progression in this environment is necessary before developing technical training. Employers cannot afford to ignore this finding.

The second type of training suggested by this research would be aimed at supervisors who need to foster skills that promote HHA connectedness and identification with their supervisor. Developing a sense of connectedness to a team or organization has been shown to decrease intent to leave (Apker et al., 2009). The concept of "supervisor training" is very broad. However, Table 2 displays the NHHAS variables adjacent to the corresponding communication processes. Examining the NHHAS variables in the context of communicative practices surfaces themes that could be components of supervisor training: active listening, fostering a positive climate, mentoring, and empowering lower-level team members. Future research deconstructing these themes to better understand their applicability to communication in the home healthcare environment would be beneficial.

The overall finding in this study is the need for HHAs to be accepted as an essential part of the team of people who care for patients and included in decision-making. This is the premise of a book by Paul Osterman (2017) about the advantages to patients and the healthcare system of fully leveraging the home healthcare workforce.

Expanded Role for Home Health Aides

The results of this study show that home health aides have been clear for many years about their needs as caregivers. Home health aides want to be part of the larger health care team

because they know that their knowledge about their patients, if listened to, could make a difference in how care is delivered. HHAs want to be valued and respected for the difficult work that they do and want the opportunity to increase their skill level and progress their careers.

Paul Osterman, a Professor of Human Resources and Management at the M.I.T. Sloan School of Management, published an in-depth analysis of the long-term workforce's economics (2017). His premise is that providing better training and compensation will lay the foundation for the health care system to better leverage the home health aide population in the long-term care setting. Better trained home health aides who are paid a livable wage will result in increased quality and decreased cost of care and the ability to stabilize and grow the long-term care workforce.

The long-term care system is a state-by-state, fragmented array of services built on "the flimsiest of platforms: millions of poorly trained and poorly compensated workers" (Osterman, 2017). Aides who provide day-to-day assistance with patients' needs are mainly invisible to the rest of the healthcare team who decide patient care. HHAs are viewed as unmotivated, unskilled, and untrainable commodities not worth investing in. Aides are generally disrespected and discouraged in their work, as evidenced by high turnover and low numbers of new aides entering the profession.

Job performance is assumed to be a function of three factors: motivation, ability, and opportunity (Mitchell, 1982; Porter & Lawler, 1968). Osterman's view of HHAs is that there is no shortage of motivation and large amounts of untapped ability among long-term care aides. The missing link is opportunity. Osterman believes that to meet the care needs of the growing population of aging baby boomers, a fundamental change to direct care workers' role must be

made. This will require training, incorporation into care teams, greater opportunities to develop skills, and higher compensation.

At present, HHAs are constrained by scope-of-practice restrictions that do not allow them to manage their patients' health proactively. Physicians, nurses, hospital managers, regulators, elected officials, and insurance companies are skeptical that home care aides can be real care team members. Nurse Practice Acts restrict the potential value of home care aides by limiting their scope of duties. Nurses have used their power to block legislation allowing home care aides to take on tasks such as administering medications. Interestingly, nurses are using the same arguments for limiting HHA scope-of-practice made by physician groups who objected to the push by nurses and physician assistants for greater autonomy in their delivery of care (Osby, n.d). For example, New York state spent three legislative sessions debating an "advanced home health aide" job category that would allow trained aides to take on additional medical tasks under a nurse's supervision. The bill was introduced in 2011 but did not pass until 2016, partially due to the nurses' association's objections. Training and implementation regulations were finally published in December 2018. The new law specifies 70 additional hours of training in addition to the 85 already required but limits new technical skills training to medication administration and injections. This experience demonstrates the great difficulty of expanding the HHA scope of practice on a state-by-state basis (*Advanced Home Health Aides*, n.d.).

Osterman believes that the current situation is a detriment to patient care as well as to the efficiency of the health care system. Aides have more direct knowledge about their patients' health status and are in the best position to proactively provide certain types of care and give the healthcare team valuable feedback about patient care needs. Expanding the role for HHAs would require the support of legislatures, the medical community, and payers, including

managed care insurance and, of course, Medicaid and Medicare. How to measure cost savings and the disposition of savings would need to be agreed to as part of the discussions with CMS and legislators. Ideally, cost savings would fund increased salary and benefits and training for the direct care workforce.

A structural change of this magnitude would be complicated. However, some socioeconomic forces may help move the process forward. First, health care reimbursement has begun to insist on better management of chronic conditions such as heart disease and diabetes (Timbie et al., 2017). This change has resulted in a more team-based approach to care. Secondly, the massive demographic change resulting from the aging baby boomer generation is increasing demand for care services, which will require a robust long-term care workforce. Finally, unionization within the direct care sector is increasing, and unions are exerting pressure on employers and payers for better wages and benefits (*Medicaid Officials Target Home Health Aides' Union Dues*, n.d.). Even so, as discussed above, there are formidable obstacles. The recommendations proposed below are not a summary of those provided by Osterman. While there are elements of Osterman's thinking, the thoughts below are more specific to training and more time-bound than the broad policy proposals set forth by Osterman.

Moving the Needle on the Supply of Home Health Aides

Efforts by individual states, while important, are only incremental and will not provide a timely response to the looming crisis in long-term care resources. An alternative approach is a Federal mandate to establish national standards for nursing aide's knowledge and technical proficiency that replaces the potpourri of state requirements. This is not a radical concept. All 50 states use the same registered nurse (RN) licensing exam. Nursing aide national standards

could apply to nursing home aides, home health aides, hospice aides, and hospital aides. In other words, nursing aids of any type would all receive the same training. This would make the aide resource interchangeable among healthcare settings and provide the employer and employee portability of skill sets locally and nationally.

Integral to national licensing standards is the definition of enhanced job responsibilities available to certified aides such as wound care, catheter care, medication administration, injections, physical therapy, etc. A two-to-three-year certification "ladder" could be created that triggers enhanced job responsibilities, higher pay, better benefits, as well as career advancement opportunities as aides ascend the certification ladder. Electronic certification testing would be available, with employers responsible for practical tests. A transition period of three to five years would be necessary for agencies to employ certified aides and verify their workforce's credentials as part of the reimbursement process. Federal policies that override physician, nurse objections to an expanded role for nursing aides must be implemented. Creating the initial infrastructure for this program would by necessity be Federally funded, with on-going administration of the program the responsibility of states. This program's administration and management could be placed within State Health and Human Services departments.

To create additional opportunities for advancement, States may wish to provide scholarships to aides who complete the certification ladder. This would allow aides to further their education at a local community college to enter a high-demand allied health career such as an occupational or physical therapist assistant, nuclear medicine technologist, dental hygienist, radiation therapist, medical sonographer, MRI technician, pharmacy technician, cardiovascular technician, audiologist, lab technician, respiratory therapist, medical assistant, or a medical records technician, to name a few. Such opportunities would provide potential entrants to an

aide job with a vision of what other careers are possible based on their progression as a nursing aide.

Advantages to National Nursing Aide Standards

The implementation of national nursing aide standards would address two critical issues in home care – aide resources and the cost of care. The nation must recruit a substantial number of new HHAs and retain current HHAs to keep up with the demand for services that allow elders to age in the place they most prefer – at home. Home care is a more cost-effective option than institutional care (*Nursing Homes vs Home Care | What's the Difference & How to Choose*, 2018). National standards and an obvious career path would likely make the job of a nursing aide more attractive to recruits and would allow inter-changeability of aides between care settings (nursing home care, home care, and hospice care, etc.).

Expanding the role of home care aides would reduce healthcare costs by allowing aides to do simple medical tasks that are currently handled by more expensive nurse and occupational/physical therapist labor. Training the person who interacts most with the patient to recognize health issues early and prevent the progression of a condition before the patient requires hospitalization and/or costly treatment will increase the quality of care while simultaneously decreasing the cost of care.

The recommendation for creating national nursing aide standards is aspirational. It will not occur overnight, but it is the fastest path forward to making changes required to avert an eldercare crisis. In the meantime, this research provided guidance on training for supervisors that could be implemented immediately to fill a dire need among aides for more and better interaction with their supervisors. Also, more forward-thinking agencies could begin to seek out

technical training opportunities for their aides. Employers should also organize themselves to lobby lawmakers and regulators to expeditiously move forward on long-term care reform. For some agencies, it is a matter of the survival of their business and valuable home care resources.

Conclusions

As the population continues to age, the need for assistance with daily activities and in-home care is inevitable. Unfortunately, home health aide resources to provide this care are not keeping pace with the demand. The most frequently mentioned reason for high turnover among home health aides is compensation. However, implementing policies to improve funding for home health care is a long-term proposition. Therefore, other strategies to decrease turnover in the short-term are needed.

This study provides two strategies that home health agencies can immediately take to bolster the home health aide workforce. First is implementing skills training that empowers aides and provides a sense that they have a career and not just a job.

The second strategy is supervisor training. The remote nature of an aides' work influences their feelings and attitudes about their jobs. This study revealed that the relationship between a supervisor and aide and how supervisors communicate with aides is a critical influence in the eventual turnover of home health aides. Supervisors become an aide's primary link to their employer. In essence, the supervisor is the organization. Fostering an aide's attachment to supervisors rather than to organizations may be the key to reducing intent to leave in remote direct care work situations. Communication processes are crucial tools in such an effort. This study provides concrete direction for the content of supervisor training.

More broadly, this dissertation is the foundation for a new area of investigation in home health aide job satisfaction research. The influence of communication processes in home healthcare has not been studied and is thus an opportunity to develop an entirely new field of inquiry for this vital topic.

REFERENCES

Advanced Home Health Aides. (n.d.). Health.ny.gov. Retrieved February 17, 2021, from https://health.ny.gov/facilities/home_care/advanced_home_health_aides/

Ajzen I. (1985) From Intentions to Actions: A Theory of Planned Behavior. In: Kuhl J., Beckmann J. (eds) Action Control. SSSP Springer Series in Social Psychology. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-69746-3_2

Apker, Julie, Propp, Kathleen M, & Zabava Ford, Wendy S. (2009). Investigating the Effect of Nurse-Team Communication on Nurse Turnover: Relationships Among Communication Processes, Identification, and Intent to Leave. Health Communication, 24(2), 106-114.

Bandura, A. (1997). *Self-efficacy the exercise of control*. New York Freeman.

Banijamali, S., Jacoby, D., & Hagopian, A. (2014). Characteristics of Home Care Workers Who Leave Their Jobs: A Cross-Sectional Study of Job Satisfaction and Turnover in Washington State. *Home Health Care Services Quarterly*, *33*(3), 137–158. https://doi.org/10.1080/01621424.2014.929068

Barsade, S. G. & O'Neill, O. A. (2014). What's Love Got to Do with It? A Longitudinal Study of the Culture of Companionate Love and Employee and Client Outcomes in a Long-term Care Setting. Administrative Science Quarterly, 59(4), 551-598.

Bartlett, J. (2014, February 8). *R squared in logistic regression – The Stats Geek*. Thestatsgeek.com. https://thestatsgeek.com/2014/02/08/r-squared-in-logistic-regression/

Bercovitz, A., & National Center for Health Statistics. (2010). Design and operation of the National Home Health Aide Survey, 2007-2008. (Vital and health statistics. Series 1, Programs and collection procedures no. 49). U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

Blau, G. J. (1988). Further exploring the meaning and measurement of career commitment. Journal of Vocational Behavior, 32(3), 284-297.

Bls.gov. (2018). *Home Health Aides*. [online] Available at: https://www.bls.gov/oes/current/oes311011.htm [Accessed 28 Oct. 2019].

Bos, A, & Harrington, C. (2017). What Happens to a Nursing Home Chain When Private Equity Takes Over? A Longitudinal Case Study. Inquiry (Oslo), 54, 1.

Brunetto, Y., Shriberg, A., Farr-Wharton, R., Shacklock, K., Newman, S., & Dienger, J. (2013). The importance of supervisor-nurse relationships, teamwork, wellbeing, affective commitment and retention of North American nurses. *Journal of Nursing Management, 21*(6), 827–837. https://doi.org/10.1111/jonm.12111

Bryant, B. (2019, January 28). Caregiver Shortage Could Mean 7.8 Million Unfilled Jobs By 2026. Retrieved June 9, 2019, from https://homehealthcarenews.com/2019/01/caregiver-shortage-could-mean-7-8-million-unfilled-jobs-by-2026/

Buelow, J. R., Winburn, K., & Hutcherson, J. (1999). Job satisfaction of home care assistants related to managerial practices. *Home Health Care Services Quarterly*, *17*(4), 59–71. https://doi.org/10.1300/J027v17n04_05

Butler, S. S., Brennan-Ing, M., Wardamasky, S., & Ashley, A. (2014). Determinants of longer job tenure among home care aides: What makes some stay on the job while others leave? *Journal of Applied Gerontology*, *33*(2), 164–188. https://doi.org/10.1177/0733464813495958

Butler, S. S., Wardamasky, S., & Brennan-Ing, M. (2012). Older Women Caring for Older Women: The Rewards and Challenges of the Home Care Aide Job. *Journal of Women and Aging*, *24*(3), 194–215. https://doi.org/10.1080/08952841.2012.639667

Castle, N. G., Engberg, J., & Anderson, R. (2007). *Job Satisfaction of Nurse Aides in Nursing Homes: Intent to Leave and Turnover – ProQuest Nursing & Allied Health Source – ProQuest*. *47*(2), 193–204. Retrieved from http://search.proquest.com/nursing/docview/211020569/E04033D35F154466PQ/1?accountid=14495

Cheney, G., & Tompkins, P. K. (1987). Coming to terms with organizational identification and commitment. *Central States Speech Journal, 38*, 1-15.

Chester A. Insko, John Schopler, James F. Kennedy, Kenneth R. Dahl, Kenneth A. Chester A. Insko, John Schopler, James F. Kennedy, Kenneth R. Dahl, Kenneth A. Graetz, & Stephen M. Drigotas. (1992). Individual-Group Discontinuity from the Differing Perspectives of Campbell's Realistic Group Conflict Theory and Tajfel and Turner's Social Identity Theory. *Social Psychology Quarterly, 55*(3), 272-291.

Choi, J., & Johantgen, M. (2012). The importance of supervision in retention of CNAs. *Research in Nursing and Health*, *35*(2), 187–199. https://doi.org/10.1002/nur.21461

Delp, L., Wallace, S. P., Geiger-Brown, J., & Muntaner, C. (2010). Job stress and job satisfaction: Home care workers in a consumer-directed model of care. *Health Services Research*, *45*(4), 922–940. https://doi.org/10.1111/j.1475-6773.2010.01112.x

Diener E. (2000) Subject wellbeing: the science of happiness, and a proposal for a national index. *American Psychology 55*, 34–43.

Ejaz, F. K., Noelker, L. S., Menne, H. L., & Bagaka's, J. G. (2008). The impact of stress and support on direct care workers' job satisfaction. *The Gerontologist, 48 Spec No*(I), 60–70. https://doi.org/10.1093/geront/48.Supplement_1.60

Faber, N., & Shinkle, D. (2011). *Aging in Place: A State Survey of Livability Policies and Practices* (pp. 1–65). Washington, DC: AARP Public Policy Institute.

Farrell, D. (1983). Exit, Voice, Loyalty, and Neglect as Responses to Job Dissatisfaction: A Multidimensional Scaling Study. *Academy of Management Journal, 26(4),* 596-607.

FastStats - Home Health Care. (2019). https://www.cdc.gov/nchs/fastats/home-health-care.htm

Feldman, P. H., Ryvicker, M., Evans, L. M., & Barrón, Y. (2019). The Homecare Aide Workforce Initiative: Implementation and Outcomes. *Journal of Applied Gerontology, 38*(2), 253–276. https://doi.org/10.1177/0733464817707298

Fishbein, M. (1967). Readings in attitude theory and measurement. Wiley.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research / Martin Fishbein, Icek Ajzen. (Addison-Wesley series in social psychology). Addison-Wesley Pub.

Ford, L. A., & Ellis, B. H. (1998). A preliminary analysis of memorable support and nonsupport messages received by nurses in acute care settings. *Health Communication, 10*: 37-63.

Franzosa, E., Tsui, E. K., & Baron, S. (2018). "Who's Caring for Us?": Understanding and Addressing the Effects of Emotional Labor on Home Health Aides' Well-being. *The Gerontologist, XX*(Xx), 1–10. https://doi.org/10.1093/geront/gny099

Friedland, R. B. (2015, January 31). Selected Long-Term Care Statistics. Retrieved January 27, 2020, from https://www.caregiver.org/selected-long-term-care-statistics

Friedman, Penny H.; et al.. Journal of Applied Gerontology, April 2017 "The Homecare Aide Workforce Initiative: Implementation and Outcomes."

Frogner, Bianca K, & Skillman, Susan M. (2016). Pathways to middle-skill allied health care occupations: Better information about the skills required in health occupations and the paths to career advancement could provide opportunities for workers as well as improved health care. Issues in Science and Technology, 33(1), 52.

Garson, G. D. (2016). *Logistic Regression: Binary & Mutinomial* [Review of *Logistic Regression: Binary & Mutinomial*]. G. David Garson and Statistical Associates Publishing.

Gleason, H. P., & Miller, E. A. (2021). Maximizing Home Health Aide Retention: The Impact of Control and Support on the Job. *The Gerontologist*. https://doi.org/10.1093/geront/gnab003

Gleason, Hayley P, Boerner, Kathrin, & Barooah, Adrita. (2016). Supporting home health aides through a client's death: The role of supervisors and coworkers. Geriatric Nursing (New York), 37(4), 278-283.

Holly, R. (2019, May 9). Home Care Industry Turnover Reaches All-Time High of 82%. Retrieved October 10, 2019, from https://homehealthcarenews.com/2019/05/home-care-industry-turnover-reaches-all-time-high-of-82/

Holly, R. (2019, September 15). *Amedisys Going After 2,000 Home Health Targets in Mom-and-Pop Land Rush*. Home Health Care News; Home Health Care News. https://homehealthcarenews.com/2019/09/amedisys-going-after-2000-home-health-targets-in-mom-and-pop-land-rush%ef%bb%bf/

Holly, R. (2020, January 6). The Top Home Health Trends of 2020. Retrieved from Home Health Care News website: https://homehealthcarenews.com/2020/01/the-top-home-health-trends-of-2020%EF%BB%BF/

Home Health Aides and Personal Care Aides: Occupational Outlook Handbook: U.S. Bureau of Labor Statistics. (n.d.). Www.bls.gov. Retrieved February 17, 2021, from https://www.bls.gov/ooh/healthcare/home-health-aides-and-personal-care-aides.htm#tab-4

Home Health and Personal Care Aides. (n.d.). www.bls.gov. Retrieved January 26, 2021, from https://www.bls.gov/oes/current/oes311011.htm

Home Health Aide Training Requirements by State. (n.d.). PHI. Retrieved March 11, 2021, from https://phinational.org/advocacy/home-health-aide-training-requirements-state-2016/

Howes, C. (2008). Love, money, or flexibility: what motivates people to work in consumer-directed home care? *The Gerontologist*, *48 Spec No*(I), 46–59. https://doi.org/10.1093/geront/48.Supplement_1.46

Insko, C.A., Schopler, J., Kennedy, J.F., Dahl, K.R., Graetz, K. A., & Drigotas, S. M. (1992). Individual-Group Discontinuity from the Differing Perspectives of Campbell's Realistic Group Conflict Theory and Tajfel and Turner's Social Identity Theory. *Social Psychology Quarterly, 55(3)*, 272. https://doi.org/10.2307/2786796

Jablin, F. M. (1987). Organizational entry, assimilation, and exit. In F. M. Jablin, L. Putnam, K. Roberts, & L. Porter (Eds.), Handbook of organizational communication: An interdisciplinary perspective (pp. 679-740). Newbury Park, CA: Sage Publications Ltd.

Jang, Y., Lee, A. A., Zadrozny, M., Bae, S. H., Kim, M. T., & Marti, N. C. (2017). Determinants of Job Satisfaction and Turnover Intent in Home Health Workers: The Role of Job Demands and Resources. *Journal of Applied Gerontology*, *36*(1), 56–70. https://doi.org/10.1177/0733464815586059

Johnson, J. V., & Hall, E. M. (1988). Job strain, workplace social support, and cardiovascular disease: a cross-sectional study of a random sample of the Swedish working population. American Journal of Public Health, 78, 1336-1342.

Johnson, J. V., Hall, E. M., & Theorell, T. (1989). Combined effects of job strain and social isolation on cardiovascular disease morbidity and mortality in a random sample of the Swedish male working population. Scandinavian Journal of Work, Environment and Health, 15, 271-279.

Karasek, R.A. (1979). Job demands, job decision latitude and mental strain: implications for job redesign. Administrative Science Quarterly, 24, 285-308.

Karimi, L., Cheng, C., Bartram, T., Leggat, S., & Sarkeshik, S. (2015). The effects of emotional intelligence and stress-related presenteeism on nurses' well-being. Asia Pacific Journal of Human Resources, 53(3), 296-310.

Kellough, J. E., & Osuna, W. (1995). Cross-Agency Comparisons of Quit Rates in the Federal Service. Review of Public Personnel Administration, 15(4), 58-68.

Kemper, P., Heier, B., Barry, T., Brannon, D., Angelelli, J., Vasey, J., & Anderson-Knott, M. (2011). What Do Direct Care Workers Say Would Improve Their Jobs? Differences Across Settings. *The Gerontologist*, *48*(suppl 1), 17–25. https://doi.org/10.1093/geront/48.supplement_1.17

Kraut, A. I. (1975). Predicting turnover of employees from measured job attitudes. Organizational Behavior and Human Performance, 13(2), 233-243.

Kuhn, T., & Nelson, N. (2002). Reengineering identity. *Management Communication Quarterly, 16*, 5-38.

Landes, S. D., & Weng, S. S. (2020). Racial–Ethnic Differences in Turnover Intent Among Home Health Aides. *Journal of Applied Gerontology*, *39*(5), 490–501. https://doi.org/10.1177/0733464819827806

Lee T. & Ko Y. (2010) Effects of self-efficacy, affectivity, and collective efficacy on nursing performance of hospital nurses. Journal of Advanced Nursing 66(4), 839–848.

Maertz, C. P., Griffeth, R. W., Campbell, N. S., & Allen, D. G. (2007). The effects of perceived organizational support and perceived supervisor support on employee turnover. *Journal of Organizational Behavior*, *28*(8), 1059–1075. https://doi.org/10.1002/job.472

Mather, Mark, et al. "Fact Sheet: Aging in the United States." *Population Reference Bureau*, Population Reference Bureau, 15 Jul. 2019, www.prb.org/aging-unitedstates-fact-sheet/.

McCaughey, D., McGhan, G., Kim, J., Brannon, D., Leroy, H., & Jablonski, R. (2012). Workforce implications of injury among home health workers: Evidence from the national home health aide survey. *Gerontologist*, *52*(4), 493–505. https://doi.org/10.1093/geront/gnr133

McNeese-Smith, D. K., & Crook, M. (2003). Nursing Values and a Changing Nurse Workforce. *JONA: The Journal of Nursing Administration*, *33*(5), 260–270. https://doi.org/10.1097/00005110-200305000-00002

McPherson, B. (2016, March 3). Preventing Caregiver Turnover. Retrieved July 6, 2019, from https://www.homecaremag.com/operations-management/february-2016/preventing-caregiver-turnover.

Medicaid covered share U.S. 1990-2019. (n.d.). Statista. Retrieved January 27, 2021, from https://www.statista.com/statistics/200960/percentage-of-americans-covered-by-medicaid/

Medicaid Officials Target Home Health Aides' Union Dues. (n.d.). NPR.org. Retrieved February 17, 2021, from https://www.npr.org/sections/health-shots/2018/08/09/636500804/medicaid-officials-target-home-health-aides-union-dues

Mitchell, T. R. (1982). Motivation: New directions for theory, research, and practice. *Academy of Management Review*, *7*, 80–88.

Mobley, W. H., Horner S. O., & Hollingsworth, A. T. An evaluation of precursors of hospital employee turnover. J Appl Psychol. 1978 Aug;63(4):408-14. PMID: 701211.

Montgomery, R. J. V., Lyn Holley, P., Deichert, J., & Kosloski, K. (2005). A Profile of Home Care Workers From the 2000 Census: How It Changes What We Know. *The Gerontologist*, *45*(5), 593–600. https://doi.org/10.1093/geront/45.5.593

Morgan, J.C., Dill, J. & Kallebert, A. L. (2013), "The quality of healthcare jobs: can intrinsic rewards compensate for low extrinsic rewards?" Work, employment and society 27(5) 802-822, 2013.

Murrells, T., Robinson, S., & Griffiths, P. (2008). Is satisfaction a direct predictor of nursing turnover? Modeling the relationship between satisfaction, expressed intention, and

behavior in a longitudinal cohort study. *Human Resources for Health*, *6*, 1–12. https://doi.org/10.1186/1478-4491-6-22

NHHCS - National Home Health Aide Survey. (2019, March 2). www.cdc.gov. https://www.cdc.gov/nchs/nhhcs/nhhas.htm.

Nursing Homes vs Home Care | What's the Difference & How to Choose. (2018, May 29). SeniorLiving.org. https://www.seniorliving.org/compare/nursing-home-vs-home-care/

Older Americans Act | ACL Administration for Community Living. (2016). Acl.gov. https://acl.gov/about-acl/authorizing-statutes/older-americans-act

Osby, L. (n.d.). *Doctors fight advance-practice nurses' attempt at autonomy*. The Greenville News. https://www.greenvilleonline.com/story/news/health/2017/03/12/doctors-fight-advance-practice-nurses-attempt-autonomy/98700998/

Osterman, P. (2017). *Who will care for us? Long-term Care and the Long-term Workforce* (p. 158-162). New York: Russell Sage Foundation.

Ozga, M. (2015, April 28). SURVEY: Home Care Worker Turnover Topped 60 Percent in 2014. Retrieved March 2, 2019, from https://phinational.org/survey-home-care-worker-turnover-topped-60-percent-in-2014/.

Personal Care Aide Training Requirements. (n.d.). PHI. Retrieved March 11, 2021, from https://phinational.org/advocacy/personal-care-aide-training-requirements/

PHI. (2020). *U.S. Home Care Workers: Key Facts (2019)*. [online] Available at https://phinational.org/resource/u-s-home-care-workers-key-facts-2019/ [Accessed 28 Jan. 2020].

Porter, L. W., & Lawler, E. E. (1968). *Managerial attitudes and performance*. Homewood, IL: Dorsey Press.

Prestholdt, P.H., Lane, I.M., & Mathews, R.C. Nurse turnover as reasoned action: development of a process model. J Appl Psychol. 1987 May;72(2):221-7. PMID: 3583978.

Price-Glynn, K., & Rakovski, C. (2012). Who rides the glass escalator? Gender, race, and nationality in the national nursing assistant study. Work, Employment and Society, 26(5), 699–715. https://doi.org/10.1177/0950017012451634

Propp, K. M., Apker, J., Ford, W. S. Z., Hofmeister, N., Wallace, N., & Pelletier, M. S. (2005, November). *Functional requisites of nurse-team communication: Identification of promotive and counteractive communication behaviors that enhance patient-care outcomes.* Paper presented at the National Communication Association annual meeting, Boston, MA.

R Handbook: p-values and R-square Values for Models. (n.d.). Rcompanion.org. Retrieved February 20, 2021, from https://rcompanion.org/handbook/G_10.html

Raeves, E. and Musumeci, M. (2015). *Medicaid and Long-Term Services and Supports: A Primer*. [online] The Henry J. Kaiser Family Foundation. Available at: https://www.kff.org/medicaid/report/medicaid-and-long-term-services-and-supports-a-primer/ [Accessed 28 Jan. 2020].

Ray, E. B. (1987). Supportive relationships and occupational stress in the workplace. In T. L. Albrecht & M. B. Adelman (Eds.), *Communicating Social Support* (pp. 172-191). Newbury Park, CA: Sage.

Rusbult, Caryl, & Lowery, David. (1985). When Bureaucrats Get the Blues: Responses to Dissatisfaction Among Federal Employees. Journal of Applied Social Psychology, 15(1), 80-103.

Salary.com. (2021). *Home Health Aide*. Salary.com. https://www.salary.com/research/salary/listing/home-health-aide-hourly-wages

Schindel J., Solomon K., Immartino B., and Santimauro J. (2006). *Workers Who Care: A graphical Profile of the Frontline Health and Healthcare Workforce*. Princeton, NJ: Robert Wood Johnson Foundation.

Scott, M. E. (2020). Identifying Barriers to Organizational Identification among Low-Status, Remote Healthcare Workers. Communication Studies, 71(4), 685-698.

Scott, C. R., Connaughton, S. L., Diaz-Saenz, H. R., Maguire, K., Ramirez, R., Richardson, B., Morgan, D. (1999). The Impacts of Communication and Multiple Identifications on Intent to Leave: A Multimethodological Exploration. *Management Communication Quarterly*, *12*(3), 400–435. https://doi.org/10.1177/0893318999123002

SEIU Healthcare (2012). *Why They Leave: Turnover Among Washington's Home Care Workers*. [online] Federal Way: SEIU Healthcare, pp.6-7. Available at: http://seiu775.org/report-turnover-among-wa-home-care-workers/ [Accessed 27 Jan. 2019].

Sengupta, M., Ejaz, F. K., & Harris-Kojetin, L. D. (2012). Training of Home Health Aides and Nurse Aides: Findings From National Data. *Gerontology and Geriatrics Education*, *33*(4), 383–401. https://doi.org/10.1080/02701960.2012.702167

State Workgroups Confront the Direct Care Workforce Crisis. (n.d.). PHI. https://phinational.org/news/state-workgroups-confront-the-direct-care-workforce-crisis/

Steel, R. P., & Ovalle, N. K. (1984). A review and meta-analysis of research on the relationship between behavioral intentions and employee turnover. *Journal of Applied Psychology, 69*(4), 673–686. https://doi.org/10.1037/0021-9010.69.4.673

Stone, R., Wilhelm, J., Bishop, C. E., Bryant, N. S., Hermer, L., & Squillace, M. R. (2017). Predictors of Intent to Leave the Job among Home Health Workers: Analysis of the National Home Health Aide Survey. *Gerontologist*, *57*(5), 890–899. https://doi.org/10.1093/geront/gnw075

Stone, R. I., & Bryant, N. S. (2019). The Future of the Home Care Workforce: Training and Supporting Aides as Members of Home-Based Care Teams. *Journal of the American Geriatrics Society*, *67*(S2), S444–S448. https://doi.org/10.1111/jgs.15846 *

Tett, Robert P, & Meyer, John P. (1993). Job satisfaction, organizational commitment, turnover intention, and turnover: Path analysis based on meta-analysis findings. Personnel Psychology, 46(2), 259-293.

The Future Supply of Long-Term Care Workers in Relation to the Aging Baby Boom Generation. (2003, May 14). Retrieved from https://aspe.hhs.gov/basic-report/future-supply-long-term-care-workers-relation-aging-baby-boom-generation

Timbie, J. W., Setodji, C. M., Kress, A., Lavelle, T. A., Friedberg, M. W., Mendel, P. J., Chen, E. K., Weidmer, B. A., Buttorff, C., Malsberger, R., Kommareddi, M., Rastegar, A., Kofner, A., Hiatt, L., Mahmud, A., Giuriceo, K., & Kahn, K. L. (2017). Implementation of Medical Homes in Federally Qualified Health Centers. *New England Journal of Medicine*, *377*(3), 246–256. https://doi.org/10.1056/nejmsa1616041

Torres-Harding, Susan R., Siers, Brian & Olseon, Bradley D. (2012). Development and Psychometric Evaluation of the Social Justice Scale (SJS). American Journal of Communicty Psychology, 50 (1), 77-88.

Tri-Council for Nursing. (2001). Strategies to Reverse the New Nursing Shortage. Retrieved December 8, 2020, from https://www.aacnnursing.org/News-Information/Position-Statements-White-Papers/Reverse-Shortage.

Trjfel, H., & Turner, J. C., (1986). The Social Identity Theory of Intergroup Behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology on Intergroup Relations* (pp. 7-24). Chicago: Nelson-Hall.

UnidosUS, rights, C. largest national L. civil, & States, advocacy organization in the U. (2015, September 18). *Modern Day Settlement Houses Strengthening Communities Across the Country*. HuffPost. https://www.huffpost.com/entry/modern-day-settlement-hou_b_8153570

US Census Bureau. (2018, December 3). *Older People Projected to Outnumber Children*. The United States Census Bureau. https://www.census.gov/newsroom/press-releases/2018/cb18-41-population-projections.html

U.S. Home Care Workers: Key Facts (2019). (n.d.). PHI. Retrieved January 26, 2021, from https://phinational.org/resource/u-s-home-care-workers-key-facts-2019/

U.S. Department of Labor. (2009). *Wages and the Fair Labor Standards Act | U.S. Department of Labor*. Dol.gov. https://www.dol.gov/agencies/whd/flsa

Vancouver, J. B., & Schmitt, N. W. (2006). An Exploratory Examination of Person-Organization Fit: Organizational Goal Congruence. *Personnel Psychology*, *44*(2), 333–352. https://doi.org/10.1111/j.1744-6570.1991.tb00962.

Van Waeyenberg, T., Decramer, A., & Anseel, F. (2015). Home nurses' turnover intentions: The impact of informal supervisory feedback and self-efficacy. *Journal of Advanced Nursing*, *71*(12), 2867–2878. https://doi.org/10.1111/jan.12747

Vincent, D., & Marmo, S. (2018). Commitment to Social Justice and its Influence on Job Satisfaction and Retention of Nonprofit Middle Managers. *Human Service Organizations Management, Leadership and Governance*, *42*(5), 457–473. https://doi.org/10.1080/23303131.2018.1532370

Walmart.com Hourly Pay | PayScale. (2019). Payscale.com. https://www.payscale.com/research/US/Employer=Walmart.com/Hourly_Rate

Weiss, D. J., Dawis, R. V., & England, G. W. (1967). Manual for the Minnesota Satisfaction Questionnaire. *Minnesota Studies in Vocational Rehabilitation, 22,* 120.

Weiss, H. M.; & Merlo, K. L. (2015) Job Satisfaction. In J.D. Wright (Ed.) International encyclopedia of the social and behavioral sciences (2nd ed., Vol. 12, pp. 833 - 838). Oxford, UK: Elsevier.

Weng, S. S., & Landes, S. D. (2017). Culture and Language Discordance in the Workplace: Evidence from the National Home Health Aide Survey. *Gerontologist*, *57*(5), 900–909. https://doi.org/10.1093/geront/gnw110

What are Variance Inflation Factors (VIFs)? | Displayr.com. (2018, April 6). Displayr. https://www.displayr.com/variance-inflation-factors-vifs/

Withey, M. J. & Cooper, W. J. (1989). Predicting Exit, Voice, Loyalty, and Neglect. Administrative Science Quarterly, 34(4), 521-539.

Wu, S. (2020). *Multicollinearity in Regression* [Review of *Multicollinearity in Regression*]. www.towarddatascience.com/Multi-Collinearity-In-a-Regression-Fe7a2c1467ea.

Yoon, S., Probst, J., & DiStefano, C. (2016). Factors Affecting Job Satisfaction Among Agency-Employed Home Health Aides. *Home Health Care Management and Practice*, *28*(1), 57–69. https://doi.org/10.1177/1084822315603195

Wilhelm, J., Bryant, N., Sutton, J. P., & Stone, R. (2015). *Predictors of job satisfaction and intent to leave among home health workers: An analysis of the national home health aide survey*. (January). Retrieved from https://aspe.hhs.gov/system/files/pdf/108336/JobSatPre.pdf

Appendix A

References for Published Analyses of the National Home Health Aide Survey Database

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Arlinghaus, A., Caban-Martinez, A. J., Marino, M., & Reme, S. E. (2013). The role of ergonomic and psychosocial workplace factors in the reporting of back injuries among U.S. home health aides. *American Journal of Industrial Medicine*, *56*(10), 1239–1244. https://doi.org/10.1002/ajim.22197

Byon, H. D. (2016). Exploration of Risk Factors for Patent Violence toward Direct Care Workers in the Home Setting Using an Ecological Model.

Caban-Martinez, A. J., Arlinghaus, A., & Reme, S. E. (2013). Correlates of seasonal flu vaccination among U.S. home health aides. *Vaccine*, *31*(2), 287–290. https://doi.org/10.1016/j.vaccine.2012.10.108

Houston, A., Young, Y., & Fitzgerald, E. F. (2013). Work-related injuries: An old problem revisited in the first representative U.S. sample of home health aides. *Journal of Aging and Health*, *25*(6), 1065–1081. https://doi.org/10.1177/0898264313499932

Jang, Y., Lee, A. A., Bae, S., & Kim, M. T. (2015). Determinants of Job Satisfaction and Turnover Intent in Home Health Workers : The Role of Job Demands and Resources. *Journal of Applied Gerontology*, (May), 1–16. https://doi.org/10.1177/0733464815586059 *

Laise, E. (n.d.). *Private-equity takeover of nursing homes has reduced quality of care at critical moment, research suggests*. MarketWatch. Retrieved February 17, 2021, from https://www.marketwatch.com/story/coronavirus-pandemic-puts-private-equity-ownership-of-nursing-homes-under-microscope-2020-03-14

Landes, S. D., & Weng, S. S. (2020). Racial–Ethnic Differences in Turnover Intent Among Home Health Aides. *Journal of Applied Gerontology*, *39*(5), 490–501. https://doi.org/10.1177/0733464819827806 *

Lee, Doohee, & Jun Kwak, Won. (2014). Interactive effects of consideration leadership on the association of injury with training among home health aides. Leadership in Health Services (2007), 27(1), 41-50.

McCaughey, D., McGhan, G., Kim, J., Brannon, D., Leroy, H., & Jablonski, R. (2012). Workforce implications of injury among home health workers: Evidence from the national home health aide survey. *Gerontologist*, *52*(4), 493–505. https://doi.org/10.1093/geront/gnr133

Price-Glynn, Kim, & Rakovski, Carter. (2019). Vulnerable Caregivers: A Comparison of Direct Care Workers' Health Risks in Skilled Nursing Facilities and Private Homes. In Underserved and Socially Disadvantaged Groups and Linkages with Health and Health Care Differentials (Vol. 37, pp. 225-238). Emerald Publishing Limited.

Rakovski, Carter, & Price-Glynn, Kim. (2012). Intersectional Identities and Worker Experiences in Home Health Care: The National Home Health Aide Survey. Issues in Health and Health Care Related to Race/Ethnicity, Immigration, SES and Gender, 30, 261-280.

Sengupta, M., Ejaz, F. K., & Harris-Kojetin, L. D. (2012). Training of Home Health Aides and Nurse Aides: Findings From National Data. *Gerontology and Geriatrics Education*, *33*(4), 383–401. https://doi.org/10.1080/02701960.2012.702167 *

Stone, R. I., & Bryant, N. S. (2019). The Future of the Home Care Workforce: Training and Supporting Aides as Members of Home-Based Care Teams. *Journal of the American Geriatrics Society*, *67*(S2), S444–S448. https://doi.org/10.1111/jgs.15846 *

Stone, R., Wilhelm, J., Bishop, C. E., Bryant, N. S., Hermer, L., & Squillace, M. R. (2017). Predictors of Intent to Leave the Job among Home Health Workers: Analysis of the National Home Health Aide Survey. *Gerontologist*, *57*(5), 890–899. https://doi.org/10.1093/geront/gnw075 *

Weng, S. S., & Landes, S. D. (2017). Culture and Language Discordance in the Workplace: Evidence from the National Home Health Aide Survey. *Gerontologist*, *57*(5), 900–909. https://doi.org/10.1093/geront/gnw110 *

Yoon, S., Probst, J., & DiStefano, C. (2016). Factors Affecting Job Satisfaction Among Agency-Employed Home Health Aides. *Home Health Care Management and Practice*, *28*(1), 57–69. https://doi.org/10.1177/1084822315603195 *

Zoeckler, J. M. (2017). Occupational Stress and Health Among Home Health Care Workers. Dissertation.

*Publications cited in this dissertation.

Appendix B

Supplementary Data

Table 17 - Age Distribution of Aides Delivering Care in Patient's Home

SEX	Freq.	Percent	Cum.
20	11	1.12	1.12
21	5	0.51	1.62
22	10	1.01	2.64
23	12	1.22	3.85
24	15	1.52	5.38
25	17	1.72	7.1
26	16	1.62	8.72
27	17	1.72	10.45
28	17	1.72	12.17
29	14	1.42	13.59
30	17	1.72	15.31
31	18	1.83	17.14
32	19	1.93	19.07
33	19	1.93	20.99
34	32	3.25	24.24
35	14	1.42	25.66
36	17	1.72	27.38
37	22	2.23	29.61
38	31	3.14	32.76
39	18	1.83	34.58
40	24	2.43	37.02
41	29	2.94	39.96
42	24	2.43	42.39
43	34	3.45	45.84
44	30	3.04	48.88
45	33	3.35	52.23
46	28	2.84	55.07
47	26	2.64	57.71
48	30	3.04	60.75
49	23	2.33	63.08
50	26	2.64	65.72
51	26	2.64	68.36
52	23	2.33	70.69
53	30	3.04	73.73
54	26	2.64	76.37
55	22	2.23	78.6
56	40	4.06	82.66
57	22	2.23	84.89
58	14	1.42	86.31
59	22	2.23	88.54
60	25	2.54	91.08
61	17	1.72	92.8
62	17	1.72	94.52
63	8	0.81	95.33
64	10	1.01	96.35
65	36	3.65	100

Total	986	100

Table 18 – Overall Frequency of Responses to Variable Levels

LEAVEJOB	Freq.	Percent	Cum.
0=Not at all likely to leave job	783	**79.41**	79.41
1=Very or somewhat likely to leave job	203	20.59	100
SUPCLEAR - My supervisor provides clear instructions			
1=Strongly agree	752	**76.27**	76.27
2=Somewhat agree	173	17.55	93.81
3=somewhat disagree	33	3.35	97.16
4=Strongly disagree	28	2.84	100
SUPADVAN - My supervisor is supportive of progress in my career, such as further training.			
1=Strongly agree	800	**81.14**	81.14
2=Somewhat agree	146	14.81	95.94
3=somewhat disagree	23	2.33	98.28
4=Strongly disagree	17	1.72	100
SUPHEAR - My supervisor listens to me when I am worried about my patient's care.			
1=Strongly agree	764	**77.48**	77.48
2=Somewhat agree	161	16.33	93.81
3=somewhat disagree	36	3.65	97.46
4=Strongly disagree	25	2.54	100
SUPTELLS - My supervisor tells me when I am doing a good job.			

1=Strongly agree	811	**82.25**	82.25
2=Somewhat agree	140	14.2	96.45
3=somewhat disagree	14	1.42	97.87
4=Strongly disagree	21	2.13	100
CPROBSTF			
0	129	13.08	13.08
1=Respondent selected, "Aide communication problems with agency," made their job difficult or caused them to dislike their job.	857	**86.92**	100
CPROBHTH			
0	19	1.93	1.93
1=Respondent selected, "Misinformation about patient's health," made their job difficult or caused them to dislike their job.	967	**98.07**	100
PROBCOWK			
0	76	7.71	7.71
1=Respondent selected, "Coworkers," made their job difficult or caused them to dislike their job.	910	**92.29**	100
PROBSUP			
0	52	5.27	5.27
1=Respondent selected, "Supervisors," made their job difficult or caused them to dislike their job.	934	94.73	100
NOWCWORK			
0	760	**77.08**	77.08
1=Respondent selected, "You enjoy working with the other members of the care team."	226	22.92	100
NOWSUP			

0	635	**64.4**	64.4
1=Respondent selected, "You enjoy working with your supervisor."	351	35.6	100
RESPECTS			
1=My supervisor respects me a great deal.	804	**81.54**	81.54
2=My supervisor respects me somewhat.	164	16.63	98.17
3=My supervisor does not respect me at all.	18	1.83	100
SUPVALUE			
1=My supervisor values and appreciated the work I do as a home health aide very much.	818	**82.96**	82.96
2=My supervisor values or appreciates the work I do as a home health aide somewhat.	152	15.42	98.38
3=My supervisor does not value at all the work I do as a home health aide.	16	1.62	100
Need ORGVALUE			
1=My organization values and appreciated the work I do as a home health aide very much.			
2=My organization values or appreciates the work I do as a home health aide somewhat.			
3=My organization does not value			

at all the work I do as a home health aide.		
Total	986	100

Table 19 – Multicollinearity Test

Variable		VIF	1/VIF
SUPCLEAR			
	2	1.38	0.725733
	3	1.44	0.696631
	4	1.78	0.560367
SUPADVAN			
	2	1.32	0.757106
	3	1.32	0.75691
	4	1.63	0.613121
SUPHEAR			
	2	1.36	0.734531
	3	1.38	0.722547
	4	1.68	0.596255
SUPTELLS			
	2	1.45	0.690355
	3	1.27	0.786041
	4	1.53	0.65558
CPROBSTF		1.1	0.905098
CPROBHTH		1.05	0.947883
PROBCOWK		1.04	0.96593
PROBSUP		1.27	0.788157
NOWCWORK		1.03	0.967658
NOWSUP		1.05	0.954374
RESPECTS			
	2	1.61	0.622354
	3	2	0.499197
SUPVALUE		2.05	0.488626
AGESEX		1.04	0.957749
HHHISPAN		1.22	0.820229
RACERECODE			
	2	1.07	0.935391
	3	1.24	0.809423
Mean VIF		1.37	

Table 20 - Required Home Health Aide Training Hours by State

State	Minimum Training Hours	Minimum Clinical Hours
Alabama	75	16
Alaska	140	80
Arizona	75	16
Arkansas	75	16
California	120	20
Colorado	75	16
Connecticut	75	16
Delaware	75	16
District of Columbia	125	40
Florida	75	16
Georgia	75	16
Hawaii	100	70
Idaho	120	40
Illinois	120	40
Indiana	75	16
Iowa	75	16
Kansas	110	45
Kentucky	75	16
Louisiana	75	16
Maine	180	70
Maryland	100	40
Massachusetts	75	16
Michigan	75	16
Minnesota	75	16
Mississippi	75	16
Missouri	75	16
Montana	91	25
Nebraska	75	16
Nevada	75	16
New Hampshire	100	60
New Jersey	76	16
New Mexico	75	16
New York	75	16
North Carolina	75	16
North Dakota	75	16
Ohio	75	16
Oklahoma	75	16
Oregon	75	16
Pennsylvania	75	16
Rhode Island	100	20
South Carolina	75	16
South Dakota	75	16
Tennessee	75	16
Texas	75	16
Utah	100	24
Vermont	80	30
Virginia	75	16
Washington	85	50
West Virginia	75	16
Wisconsin	120	32
Wyoming	91	16

https://phinational.org/advocacy/home-health-aide-training-requirements-state-2016/