EVALUATION OF A TRAINING INTERVENTION FOR PERSONAL CARE ASSISTANTS AND THE EFFECT OF AGE AND EXTRINSIC JOB SATISFACTION: CHANGES IN CAREER COMMITMENT AND JOB SATISFACTION

Jason Rachel
Virginia Commonwealth University
EVALUATION OF A TRAINING INTERVENTION FOR PERSONAL CARE ASSISTANTS AND THE EFFECT OF AGE AND EXTRINSIC JOB SATISFACTION: CHANGES IN CAREER COMMITMENT AND JOB SATISFACTION

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Health Related Sciences at Virginia Commonwealth University.

by

Jason Allan Rachel

Bachelor of Science, Virginia Commonwealth University, 1996
Master of Science, Virginia Commonwealth University, 2000

Dissertation Directors: Iris A. Parham, Ph.D. & Constance L. Coogle, Ph.D.

Virginia Commonwealth University
Richmond, Virginia
January, 2011
ACKNOWLEDGEMENTS

There are many individuals who all played significant roles in the development and ultimate completion of this dissertation. First, I would like to thank my dissertation committee for their continued, unwavering support and guidance throughout this entire process: Dr. J. James Cotter, who pushed me to a deeper understanding of theory; Dr. Rita Jablonski, who was always there to give me an encouraging word when I needed it the most; and, my co-chairs, Drs. Iris Parham and Constance L. Coogle, who provided me with the perfect balance of mentoring and coaching. I am also deeply appreciative of all the motivation and encouragement I received from my mother, father, grandmother, brothers, sisters, and lifelong friends (fondly referred to as the Brotherhood). Finally, I dedicate this dissertation to my beloved family; my wonderful wife, Dr. Colleen H. Rachel, Cecilia, Charles and John, who I will always be indebted to for their incessant love they have given me. It is only because of the support and love that I was shown from my friends and family throughout my entire academic career that allowed me to complete this journey.
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<th>Full Form</th>
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<td>ADL</td>
<td>Activities of Daily Living</td>
</tr>
<tr>
<td>ANOVA</td>
<td>Analysis of Variance</td>
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<tr>
<td>ANCOVA</td>
<td>Analysis of Covariance</td>
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<tr>
<td>BLS</td>
<td>Bureau of Labor Statistics</td>
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<td>CCM</td>
<td>Career Commitment Measure</td>
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<tr>
<td>CMS</td>
<td>Centers for Medicare and Medicaid Services</td>
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<tr>
<td>CNA</td>
<td>Certified Nursing Assistant</td>
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<tr>
<td>CPL</td>
<td>Current Population Survey</td>
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<td>DHHS</td>
<td>U.S. Department of Health and Human Services</td>
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<td>DOL</td>
<td>U.S. Department of Labor</td>
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<tr>
<td>DV</td>
<td>Dependent Variable</td>
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<tr>
<td>ECAT</td>
<td>Enhanced Care Assistant Training</td>
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<tr>
<td>GAO</td>
<td>Government Accountability Office</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>HCBC</td>
<td>Home and Community-Based Care</td>
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<tr>
<td>HSD</td>
<td>Honestly Significant Difference</td>
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<tr>
<td>IOM</td>
<td>Institute of Medicine</td>
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<tr>
<td>IRB</td>
<td>Institutional Review Board</td>
</tr>
<tr>
<td>LSD</td>
<td>Least Significant Difference</td>
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<tr>
<td>MSQ</td>
<td>Minnesota Satisfaction Questionnaire</td>
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<tr>
<td>PASW</td>
<td>Predictive Analytical Software</td>
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<tr>
<td>PCA</td>
<td>Personal Care Assistant</td>
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<td>PUMS</td>
<td>Public Use Microdata Sample</td>
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<tr>
<td>SOC</td>
<td>Standard Occupational Classification</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
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<tr>
<td>RN</td>
<td>Registered Nurse</td>
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<tr>
<td>U.S.</td>
<td>United States of America</td>
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<td>VCU</td>
<td>Virginia Commonwealth University</td>
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</table>
ABSTRACT

EVALUATION OF A TRAINING INTERVENTION FOR PERSONAL CARE ASSISTANTS AND THE EFFECT OF AGE AND EXTRINSIC JOB SATISFACTION: CHANGES IN CAREER COMMITMENT AND JOB SATISFACTION

Jason Allan Rachel

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Health Related Sciences at Virginia Commonwealth University.

Virginia Commonwealth University, 2011

Dissertation Directors: Iris A. Parham, Ph.D. & Constance L. Coogle, Ph.D.

Home care is a vital component of the United States healthcare delivery system. The demand for home care has steadily increased over the past decade and it is projected that this increase will continue over the next several decades. Moreover, the utilization of Medicaid waiver home and community-based care services has expanded to provide an alternative to the more costly institutional placement. In order to meet this growing demand while maintaining the cost-savings, the system relies primarily on the minimally trained, healthcare paraprofessionals known as Personal Care Assistants (PCAs).

The present study examined the career commitment and job satisfaction of PCAs who provide Medicaid waiver home and community-based care services and participated in a 40-hour training intervention. Specifically, the study evaluated differences in pre-
and post-training levels of career commitment as measured by the Career Commitment Measure (CCM), in terms of overall career commitment and the three subscales: career identity, career planning, and career resilience; and job satisfaction as measured by the Minnesota Satisfaction Questionnaire (MSQ), in terms of overall job satisfaction and the two subscales: extrinsic job satisfaction and intrinsic job satisfaction, between age groups and groups based on extrinsic job satisfaction. Additionally, the study examined the interaction of age and extrinsic job satisfaction as a moderator on the influence of the training intervention to produce a change in career commitment and the three subscales of career commitment, career identity, career planning, and career resilience job satisfaction.

The results of analyses were varied across groups and measures. Specifically, there were no statistically significant differences across age group in terms of changes in career commitment or job satisfaction as a consequence of the training; however, post-hoc examinations revealed statistically significant within group changes. A decrease in the overall, intrinsic, and extrinsic job satisfaction score from pre- to post-training for the 40-49 age group was found. Likewise, the 50-59 age group showed a statistically significant decrease in the extrinsic job satisfaction scores from pre- to post-training. The PCA’s level of extrinsic job satisfaction did have a statistically significant differential effect on changes in overall career commitment and career planning scores as a consequence of the training. The exploration of the interaction of age and extrinsic job satisfaction to influence changes in career commitment as a consequence of the training found statistically significant main effects with respect to levels of extrinsic job
satisfaction for overall career commitment, career identity, career planning, and career resilience. However, no main effects for age and no interaction effects were obtained.

These study findings have important implications for future research, and the development of training curricula and evaluation. Results provide critical information about this largely overlooked group of healthcare paraprofessionals, which have practical application in more effectively improving job satisfaction through training initiatives, thereby increasing the recruitment and retention of the paraprofessional healthcare workforce.
CHAPTER 1: SIGNIFICANCE OF THE PROBLEM

One of the greatest challenges facing the United States (U.S.) throughout the 21st century will be to ensure that individuals will have the healthcare supports they need throughout their lives (U.S. Department of Health and Human Services [DHHS] & U.S. Department of Labor [DOL], 2003). Healthcare is the largest single sector of the U.S. economy (Goldman & McGlynn, 2005). National health spending was expected to reach $2.5 trillion in by the end of 2009, accounting for 17.6 percent of the gross domestic product (GDP) (Siska, 2009). Furthermore, by 2018, national healthcare expenditures are expected to reach $4.4 trillion—more than double 2007 spending (Siska, 2009).

Despite the ever-increasing proportion of the U.S. GDP, the U.S. healthcare delivery system remains fraught with inefficiencies, ineffectiveness, and gaps resulting in millions of individuals receiving minimal or inadequate healthcare. The healthcare delivery system is challenged by scarce resources, fiscal constraints, limits in availability of skilled and non-skilled healthcare providers, and the increased demand due to the change in the U.S. population demographics caused by the aging of the baby boomer generation – those born between 1946 and 1964. According to the Institute of Medicine (2008), the healthcare workforce will lack the capacity in both size and ability to meet the needs of its patients in the future. Current personnel shortages suggest an immediate
need to reorient the training and practices of the healthcare workforce while simultaneously attracting additional workers to the field (Grantmakers in Health, 2009).

Recruitment and retention of all types of healthcare workers is a significant problem (IOM, 2008). Nowhere is this felt more strongly than in nursing, the largest workforce sector of the U.S. healthcare delivery system. Indeed, this concern for the nursing healthcare workforce has been documented since the turn of the century. The 2002 U.S. DHHS report on the current and future registered nurse (RN) workforce stated that the U.S. healthcare system is experiencing the effects of a record slow down in the growth of the RN population from 1996 to 2000 (a cumulative increase of only 5.4 percent), a shortage that has reached crisis proportions with far reaching implications (DHSS, Health Resources and Services Administration Bureau of Health Professions, 2006). Furthermore, this same survey of registered nurses reported that the total RN population increased from 2,696,540 in 2000 to 2,909,357 in 2004. This increase (7.9 percent) was comparatively low considering growth between earlier report intervals (e.g. the RN population grew 14.2 percent between 1992 and 1996). More recently, the US Bureau of Labor Statistics (2007) reported that over the ten-year period between 2006 and 2016, more than 587,000 new nursing positions will be created (a 23.5 percent increase), making nursing the nation’s top profession in terms of projected job growth.

Analogous to the nursing shortage is the current and predicted workforce crisis of the paraprofessional healthcare provider. This often overlooked sector of the healthcare delivery workforce is the backbone of the U.S. healthcare system as these providers supply a substantial portion of the direct care received by individuals. In the home and
community-based setting, home health aides, home care workers, and personal care assistants (PCAs) form the core of the formal care giving home care system by providing assistance with activities of daily living and personal interaction that is essential to the quality of life and quality of care for their clients (Stone, 2004). Healthcare paraprofessionals perform an estimated 70 to 80 percent of all paid “hands-on” long-term care and personal assistance received by Americans who are elderly, chronically ill, or living with disabilities (Dawson & Surpin, 2001; IOM, 2008). Genevieve Gipson (Paraprofessional Healthcare Institute, 1998) has stated healthcare paraprofessionals are “the point where the system touches the client” (p. 1). Healthcare paraprofessionals providing home care are the figurative first line of soldiers on the ground fighting against the incessant attempt of chronic illness to overpower an individual’s independence and subsequent placement in an institutional setting. Preserving this independence is of paramount importance to not only individuals themselves, but also society as a whole.

Using data from the Disability Followback Survey of the National Health Interview Survey on Disabilities from 1994 to 1997, it was estimated that there were 13.2 million adults living in the community in the U.S. who received an average of 31.4 hours of personal care per week (LaPlante, Harrington, & Kang, 2002). Not only is home and community-based personal care a heavily accessed healthcare resource, it is also one of the most unique models for healthcare service delivery due to the intimate and private nature of the setting. In no other sector of the long-term care healthcare delivery continuum is there a greater potential for the caregiver and care recipient to develop a close, emotional relationship. This intimate relationship between the care-providing PCA
and the care recipient is at the crux of what defines the quality of long-term care for this setting. Healthcare paraprofessionals spend more time with individuals who receive long-term care and human services than other degreed professionals while receiving the least amount of training and education (National Direct Service Workforce Resource Center, 2008). Therefore, for any intervention to successfully impact the quality of long-term care, it must pass through the PCA, whether indirectly, for example via policy changes and increases in reimbursement, or directly such as through PCA training and increases in wages.

It is only recently that State policymakers have begun to recognize the important role paraprofessional healthcare workers play in delivering care and how a workforce shortage would have detrimental effects on the healthcare delivery system. According to the National Survey of State Initiatives on the Long-term Care Direct-Care Workforce (National Clearinghouse on the Direct Care Workforce and the Direct Care Workers Association of North Carolina, 2005), the vast majority of states have consistently reported since 1999 (the first year this national survey examining state public policy initiatives was conducted) that there have been indications that direct care worker vacancies and turnover continue to be serious issues. Effective interventions must be developed not to only retain the current workforce, but also to assist in recruitment of the future workforce.

This study focused on the paraprofessional workforce crisis, specifically those paraprofessionals who provide Medicaid waiver home and community-based care services, by evaluating a training intervention designed to improve career commitment
and job satisfaction, with an overarching goal of instilling a sense of professionalism to help maintain the current workforce while increasing the attractiveness of the profession for new recruits.

U.S. Healthcare Delivery System and Population Health

The U.S. healthcare delivery system is a kaleidoscope of financing, insurance, delivery and payment mechanisms that remain unstandardized and loosely coordinated (Shi & Singh, 2001). The complexity and fragmentation of the U.S. healthcare delivery system results in redundancy and gaps in delivering care. This produces substantial inefficiency, and therefore, wastes scarce healthcare resources resulting in increases in costs to healthcare financing programs including publicly funded payment programs such as Medicare and Medicaid. These increased costs force difficult decisions to be made as to how to best allocate healthcare resources to the overall population. Older adults (those 65 and older) use considerably more healthcare services than young adults and their healthcare needs are often more complex (IOM, 2008). The population of older adults will continue to increase in both absolute numbers and proportion of the demographic make-up, and as a result, will consume more of the healthcare resources available. This potential to require greater amounts of healthcare resources than may be available underscores the importance of understanding and predicting the future healthcare needs of older adults.

In order to estimate the resources necessary for meeting the demand for healthcare over the coming decades, a comparison of the working members to the non-working members of society must be performed. The age-dependency ratio is defined as the
number of working age individuals (those 18-64) compared to those of non-working age (0-17 and 65+). This ratio provides significant insight into how a society will look and how it will accommodate working and non-working members. As the baby boom generation continues to age, this age-dependency ratio will dramatically shift. In 2001, there was one person over age 65 for every 5.2 people of working age; in 2025, the number of people working will drop to 3.1 (Health Policy Institute, 2004). According to a report released by the Nursing Institute at the University Of Illinois College Of Nursing (2001), the ratio of potential caregivers to older adults, those most likely to need care, will decrease by 40 percent between 2010 and 2030. This drop in the age-dependency ratio and the health of the population are vitally important factors that must be considered when determining how future healthcare needs will be met.

The strain to meet the increased demand for healthcare services will be extremely difficult, not only in terms of simply meeting the increased demand as a result of the shift in demographics and filling the vacant healthcare positions, but also in continuing to devote the required financial resources in order to meet this demand. Healthcare will continue to have an ever-increasing proportion of the GDP of the U.S. As the healthcare system continues to expand to keep up with demand, even greater inefficiencies will develop. For a system that is already plagued with redundancies and fragmentation, without the development of more efficient healthcare delivery models and interventions to retain and recruit the healthcare workforce, healthcare services may become simply too costly to provide.
Driving Forces Behind the Healthcare Paraprofessional Workforce Crisis

There are two major driving forces contributing to the potential healthcare paraprofessional workforce crisis: 1) Increase in demand driven by the aging of the Baby Boomer generation (individuals born between 1946 and 1964) resulting in a major shift in the population demographics, and 2) Decrease in the supply of typical working age individuals, age 20 to 64, who make up the healthcare workforce. The stark contrast of these two factors will result in a significant shortage in the paraprofessional healthcare workforce, which has become known as the “care gap” (Dawson & Surpin, 2001). The “care gap” will also cause a shift in how scarce healthcare resources are allocated to the population. Dawson and Surpin (2001) hypothesized that this “care gap” will increase the disparity between the insured and non-insured and those on public entitlements, such as Medicaid, with regard to the quality of healthcare currently received. LaPlante et al. (2004) have already evaluated evidence of this phenomenon and found that 29 percent of adults requiring help in two or more of the five basic Activities of Daily Living (ADLs) need more assistance than they receive. The researchers state that in a society where 85 percent of the hours of help come from family and friends (LaPlante et al., 2002), the problem of unmet need for Personal Assistance Services is magnified by the number of people who live alone, 45 percent of whom have unmet needs.

This challenge will only be further complicated by an increasing desire to live and receive non-medical care in the home versus an institution. The demand for direct care workers in home- and community-based settings is projected to grow even higher than for institutionalized settings (Harris-Kojetin, Lipson, Fielding, Kiefer, & Stone, 2004).
Furthermore, according to data gathered by ElderCarelink (2006), an elder care referral service that spots trends and identifies growing elder care management trends, non-medical home care tops the list of preferred options for those seeking care services. According to a Government Accountability Office (GAO) (2001) report, medical advances that have allowed people with chronic illnesses and disabilities to live longer, advances in technology that have allowed people with significant care needs to receive care in their homes or other community-based settings, and increased funding for in-home services, particularly from the Medicare and Medicaid programs, are important factors increasing demand for personal care services provided by healthcare paraprofessionals.

Demand Due to Population Demographic Shifts

The demand side of the “care gap” equation is driven by the shift in demographics that has been projected over the next several decades. The most significant factor increasing demand for long-term care will be the growth of the elderly population. According to the U.S. Census Bureau (2006), the population estimate of persons 65 years and older in the U.S. as of July 2005 was over 36 million. The U.S. Census Bureau (2005) projects that by the year 2030, the older population (defined as 65 and older) will nearly double to 71.5 million. Furthermore, the number of persons over age 85, those most in need of health and long-term care services, will increase from 4.6 million in 2002 to 9.6 million in 2030, more than doubling the current population.

This drastic increase in the elderly population over the next three decades is due to the aging of the Baby Boomer generation. Historically, this population has had a
tremendous impact on society and how resources are allocated. First, their impact caused
the explosion of birthing centers and maternity wards, and the subsequent construction of
additional schools at all levels. Most recently, their productivity within the workforce
has provided economic growth and prosperity unmatched in U.S. history. Despite the
tremendous impact the Baby Boomer generation has had on society throughout their
existence, the impact they will have on the healthcare delivery system as they continue to
age will be the most extreme challenge they have ever placed on society.

Aging is associated with an increase in functional limitations and in the
prevalence of chronic conditions resulting in use of more hospital visits and more
prescription medicines (Bernstein, Hing, Moss, Allen, Siller, & Tiggle, 2003). In 1999,
individuals over the age of 65 experienced nearly three times as many hospital days per
thousand than those of the general population and this ratio goes up to nearly four times
for individuals over the age of 75 (American Hospital Association, 2001). The 2000
Home and Hospice Care Survey findings indicate that 7.2 million individuals (roughly
2.5 percent of the US population) received formal home care services in 2000, of which
70 percent were over age 65 (National Center Health Care Statistics, 2004).

In Virginia, where this study’s intervention was conducted, current and projected
population demographics echo that of the national population shift phenomenon.
Specifically, Virginia will experience a 25.5 percent increase in those 65 and older
between 2000 and 2010 (US Census Bureau, 2005). Moreover, the number of
Virginians 85 and older is projected to increase by 55 percent during the same decade.
These population projections, estimates of individuals needing assistance, and the number
of PCAs currently working provide justification for the need to bolster the paraprofessional healthcare workforce in order to meet not only today’s demand, but also the future demand for healthcare.

**Shortage of Healthcare Paraprofessionals**

Experts agree there is a shortage of healthcare paraprofessionals throughout the country (Dawson & Surpin, 2001; Stone & Wiener, 2001; DHHS, 2003; IOM, 2008). The GAO (2001) estimates that between 2000 and 2030, the total working-age population is expected to grow by only 16 percent. During this same time, the traditional pool of PCAs – women aged 20 to 54 – will only increase by nine percent. Comparing this expected growth of the traditional pool of PCAs with the aging of the Baby Boomer generation will result in a shortage of PCAs. This is illustrated in Figure 1 that compares the total population of working-aged persons (18-64) and women aged 20-54 to persons at 85 and older. Considering this decline in the elderly support ratio per person 85 and older coupled with the 2006 National Health Interview Study that reported 17.3 percent of those 85 and older needed help with one or more activities of daily living, it is evident that the shifting population demographics and disability status of older adults will drive the increase in demand for healthcare (National Center for Health Statistics, 2007).

According to the latest 2006 employment estimate for the paraprofessional healthcare workforce from the Bureau of Labor Statistics (BLS), the current workforce surpasses the 3 million mark and projected demands calls for an additional 1 million new positions by 2016 (BLS, 2006). More recently, in 2008, the BLS stated that job
Figure 1. Decline in Elderly Support Ratio Expected, 2000 to 2040

opportunities should be excellent in all healthcare employment settings over the next
decade because of high job turnover, particularly from the large amount of expected
retirements and tougher immigration rules that are slowing the number of foreign
healthcare workers entering the U.S. Wage and salary employment in the healthcare
industry is projected to increase 27 percent through 2014, compared with 14 percent for
all industries combined. Additionally, the BLS projects rates of employment growth for
the various segments of the healthcare industry ranging from 13 percent in hospitals, the
largest and slowest growing industry segment, to 69 percent in the much smaller home
healthcare services. Specifically, over the 2004–2014 period, total employment of home
health aides—including the self-employed—is projected to increase by 56 percent and is currently reported as the fastest growing industry in the U.S. (BLS, 2008).

In Virginia, the need for formal healthcare services as reported by the Center for Personal Assistance Services (2005a), estimates 962,000 Virginians have a disability and of those, 172,000 require assistance with one or more ADLs. Of those requiring assistance with one or more ADLs, 81,000 are Virginians 65 and older. When compared to the estimated number of PCAs in Virginia, estimated at 17,788, there is just one PCA for every 103.4 Virginians who require assistance with one or more ADLs (Center for Personal Assistance Services, 2005b).

In summary, paraprofessional healthcare workers penetrate all sectors of the healthcare continuum from acute skilled care to non-skilled home care to long-term care. It is the ubiquity of the paraprofessional healthcare worker within the healthcare delivery system that fully justifies the need for greater efforts and resources devoted specifically to this subset of the healthcare workforce. Particularly, attention must be given to strategies that enhance job satisfaction and career commitment, and thereby improve the recruitment and retention of the paraprofessional healthcare workforce to reduce the impact of the projected workforce crisis.

Statement of Purpose

There are two purposes of this study: 1) to evaluate the change in levels of career commitment and job satisfaction of various groups of PCAs who participated in a training intervention, and 2) to examine the triumvirate relationship between the influence of a training intervention, age, and extrinsic job satisfaction on career
commitment. Specifically, the study evaluated differences in pre- and post-training levels of career commitment as measured by the Career Commitment Measure (CCM), in terms of overall career commitment and the three subscales: career identity, career planning, and career resilience; and job satisfaction as measured by the Minnesota Satisfaction Questionnaire (MSQ), in terms of overall job satisfaction and the two subscales: extrinsic job satisfaction and intrinsic job satisfaction, between age groups and groups based on extrinsic job satisfaction. Additionally, the study examined the interaction of age and extrinsic job satisfaction as moderators on the influence of the training intervention to produce a change in overall career commitment and the three subscales of the CCM.

Research Questions

There are three topics of interest for this study. First, this study examined whether there were differences in levels of career commitment and job satisfaction as a consequence of a specifically designed training intervention among age groups of PCAs providing Medicaid waiver home care services. To investigate this area, the following four research questions were addressed by this study.

1. Will the training have a significantly different effect on levels of overall career commitment by age group of personal care assistants?
2. Will the training have a significantly different effect on levels of each of the Career Commitment Measure subscales, career identity, career planning, and career resilience, by age group of personal care assistants?
3. Will the training have a significantly different effect on levels of **overall job satisfaction** by age group of personal care assistants?

4. Will the training have a significantly different effect on levels of each of the Minnesota Satisfaction Questionnaire subscales, **intrinsic job satisfaction and extrinsic job satisfaction**, by age group of personal care assistants?

Secondly, this study investigated whether there were differences in levels of career commitment and job satisfaction as a consequence of a specifically designed training intervention among various groups of PCAs providing Medicaid waiver home care services based on pre-training extrinsic job satisfaction. To investigate this area, the following three research questions were addressed by this study.

5. Will the training have a significantly different effect on levels of **overall career commitment** by extrinsic job satisfaction group of personal care assistants?

6. Will the training have a significantly different effect on levels of each of the Career Commitment Measure subscales, **career identity, career planning, and career resilience**, by extrinsic job satisfaction group of personal care assistants?

7. Will the training have a significantly different effect on the level of the Minnesota Satisfaction Questionnaire subscale **intrinsic job satisfaction**, by extrinsic job satisfaction group of personal care assistants?

Lastly, this study examined the interaction between age and extrinsic job satisfaction as a moderator on the influence of a training intervention to produce changes in both overall career commitment and the CCM subscales: career identity, career planning, and
career resilience. To investigate this area, the following two research questions were addressed by this study.

8. Do age and extrinsic job satisfaction of personal care assistants interact to influence changes in overall career commitment as a consequence of the training?

9. Do age and extrinsic job satisfaction of personal care assistants interact to influence changes in the Career Commitment Measure subscales, career identity, career planning, and career resilience, as a consequence of the training?

Methodology

To answer these nine research questions, the following corresponding hypotheses were tested:

1. The change in overall career commitment as a consequence of the training will differ by age group of personal care assistants, with the most improvement shown by the oldest age group (greater than 60), and each younger group (50-59, 40-49, and 30-39) showing decreasingly moderate improvements with the youngest age (18-29) showing the least improvement.

2. The change in each of the subscales of the Career Commitment Measure, career identity, career planning, and career resilience, as a consequence of the training will differ by age group of personal care assistants, with the most improvement shown by the oldest age group (greater than 60), and each younger group (50-59, 40-49, and 30-39) showing decreasingly moderate improvements with the youngest age (18-29) showing the least improvement.
3. The change in **overall job satisfaction** as a consequence of the training will differ by age group of personal care assistants, with the most improvement shown by the oldest age group (greater than 60), and each younger group (50-59, 40-49, and 30-39) showing increasingly moderate improvements with the youngest age (18-29) showing the least improvement.

4. The change in each of the subscales of the Minnesota Satisfaction Questionnaire, **intrinsic job satisfaction and extrinsic job satisfaction**, as a consequence of the training will differ by age group of personal care assistants, with the most improvement shown by the oldest age group (greater than 60), and each younger group (50-59, 40-49, and 30-39) showing increasingly moderate improvements with the youngest age (18-29) showing the least improvement.

5. The change in **overall career commitment** as a consequence of the training will differ by group of personal care assistants based on extrinsic job satisfaction, with the high level group showing the most improvement, the medium level group showing moderate improvement and the low level group showing the least improvement.

6. The change in each of the Career Commitment Measure subscales, **career identity, career planning, and career resilience**, as a consequence of the training will differ by group of personal care assistants based on extrinsic job satisfaction, with the high level group showing the most improvement, the medium level group showing moderate improvement and the low level group showing the least improvement.
7. The change in the Minnesota Satisfaction Questionnaire subscale, **intrinsic job satisfaction**, as a consequence of the training will differ by group of personal care assistants based on extrinsic job satisfaction, with the high level group showing the most improvement, the medium level group showing moderate improvement and the low level group showing the least improvement.

8. Age and level of extrinsic job satisfaction of personal care assistants will interact to influence changes in **overall career commitment**, as a consequence of the training.

9. Age and level of extrinsic job satisfaction of personal care assistants will interact to influence changes in each of the Career Commitment Measure subscales, **career identity, career planning, and career resilience**, as a consequence of the training.

To test the hypotheses of differences between pre- and post-measures, a one-way ANCOVA was utilized. To test the interaction between age and extrinsic job satisfaction to influence overall career commitment and each of the CCM subscales: career identity, career planning, and career resilience, as a consequence of the training, a factorial ANCOVA was utilized. Table 1 provides a detailed outline of the methodological framework for this study. A more detailed methodology including procedures and rationale is provided in Chapter Three.

**Intervention Overview**

The intervention is a 40-hour training curriculum directly targeted to PCAs providing Medicaid waiver services in Virginia titled, “Enhanced Care Assistant
Training: Recognition, Respect, and Responsibility.” Specifically, the curriculum is designed to improve the problem-solving skills, communication tactics, conflict management, stress management, and an overall sense of increased professionalism by empowering the PCA to feel recognized and respected.

The training intervention was delivered over four seven-hour modules during July and August of 2002, and again in April and May of 2003. Data were collected on-site during the first and last module of each of the two training offerings. During year one, data was collected from 136 participants. During year two, data was collected from 171 participants for a total of 307 participants for this study. A more detailed explanation of the intervention is provided in Chapter Two.

Table 1. Methodological Framework

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Independent Variable(s)</th>
<th>Dependent Variable(s)</th>
<th>Statistical Analyses</th>
<th>Covariate(s)</th>
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<tbody>
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<td>1. Will the training have a significantly different effect on levels of <strong>overall career commitment</strong> by age group of personal care assistants?</td>
<td>Age group</td>
<td>Post-training levels of overall career commitment</td>
<td>One-way ANCOVA</td>
<td>Pre-training level of overall career commitment</td>
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<td>2. Will the training have a significantly different effect on levels of each of the Career Commitment Measure subscales, <strong>career identity, career planning, and career resilience</strong>, by age group of personal care assistants?</td>
<td>Age group</td>
<td>Post-training levels of career identity, career planning, and career resilience</td>
<td>One-way ANCOVA</td>
<td>Pre-training levels of career identity, career planning, and career resilience</td>
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<td>3. Will the training have a significantly different effect on levels of <strong>overall job satisfaction</strong> by age group of personal care assistants?</td>
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<td>One-way ANCOVA</td>
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<th>Will the training have a significantly different effect on levels of each of the Minnesota Satisfaction Questionnaire subscales, <em>intrinsic job satisfaction and extrinsic job satisfaction</em>, by age group of personal care assistants?</th>
<th>Age group</th>
<th>Post-training levels of intrinsic job satisfaction and extrinsic job satisfaction</th>
<th>One-way ANCOVA</th>
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<td>One-way ANCOVA</td>
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<td>5.</td>
<td>Will the training have a significantly different effect on levels of <em>overall career commitment</em> by extrinsic job satisfaction group of personal care assistants?</td>
<td>Pre-training levels of extrinsic job satisfaction group</td>
<td>Post-training levels of overall career commitment</td>
<td>One-way ANCOVA</td>
<td>Pre-training level of overall career commitment</td>
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<td>6.</td>
<td>Will the training have a significantly different effect on levels of each of the Career Commitment Measure subscales, <em>career identity, career planning, and career resilience</em>, by extrinsic job satisfaction group of personal care assistants?</td>
<td>Pre-training levels of extrinsic job satisfaction group</td>
<td>Post-training levels of career identity, career planning, and career resilience</td>
<td>One-way ANCOVA</td>
<td>Pre-training levels of career identity, career planning, and career resilience</td>
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<td>7.</td>
<td>Will the training have a significantly different effect on the level of the Minnesota Satisfaction Questionnaire subscale <em>intrinsic job satisfaction</em> by extrinsic job satisfaction group of personal care assistants?</td>
<td>Pre-training levels of extrinsic job satisfaction group</td>
<td>Post-training levels of intrinsic job satisfaction</td>
<td>One-way ANCOVA</td>
<td>Pre-training levels of intrinsic job satisfaction</td>
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<td>8.</td>
<td>Do age and extrinsic job satisfaction interact to influence changes in <em>overall career commitment</em> as a consequence of the training?</td>
<td>Pre-training levels of extrinsic job satisfaction group &amp; Age group</td>
<td>Post-training levels of overall career commitment</td>
<td>Factorial ANCOVA</td>
<td>Pre-training level of overall career commitment</td>
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<td>9.</td>
<td>Do age and extrinsic job satisfaction interact to influence changes of each of the Career Commitment Measure subscales, <em>career identity, career planning, and career resilience</em>, as a consequence of the training?</td>
<td>Pre-training levels of extrinsic job satisfaction group &amp; Age group</td>
<td>Post-training levels of career identity, career planning, and career resilience</td>
<td>Factorial ANCOVA</td>
<td>Pre-training levels of career identity, career planning, and career resilience</td>
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CHAPTER 2: LITERATURE REVIEW

Introduction

Producing positive changes in job satisfaction and career commitment are important elements of any vocational training intervention. Moreover, when evaluating vocational training interventions, the influence of training participant demographics must be considered, as these factors can impact the effectiveness of a training intervention to change job satisfaction and career commitment, both positively and negatively. The negative impact of training was discovered in the research of Coogle, Parham, Jablonski, & Rachel (2007) where a statistically significant decline in Extrinsic Job Satisfaction was documented when participants’ scores were compared before and after the training. The research revealed the training had a differential effect on groups of participants for each of the job satisfaction constructs when divided into three groups of approximately equal size based on age: youngest group 18-39 years, middle group 40-51 years, and oldest group 52-73 years. Specifically, the youngest age group had the highest adjusted total MSQ scores and extrinsic job satisfaction scores as compared with the other two older age groups. Furthermore, it was found that the middle age group had a statistically significant decline in total MSQ scores and extrinsic job satisfaction scores, while the other two groups showed no statically significant changes. Other significant differences found by age group included the post-training scores on the Intrinsic Job Satisfaction.
construct. Again, the youngest age group scores were higher and the difference to be statistically significant as compared to the middle age group, who showed a decline in their post-training intrinsic job satisfaction scores. There was no reported change in the intrinsic job satisfaction scores for the oldest age group.

The differences in the influence of the training found by age group is clear, but exactly at what age these differences occur is still unknown. This study sought to find where these differences occur by more narrowly defining each age group by approximately 10 year increments. Furthermore, this study expanded on the initial finding of the decline in post-training extrinsic job satisfaction by Coogle, Parham, Jablonski, & Rachel (2007) by evaluating the differences between groups of PCAs based on their levels of pre-training extrinsic job satisfaction. Lastly, this study examined the relationship between the constructs of career commitment and job satisfaction to gain a better understanding on how to develop future interventions that will improve career commitment and job satisfaction and thereby, improve retention and address the workforce crisis.

There are two purposes of this study: 1) to evaluate the change in levels of career commitment and job satisfaction of various groups of PCAs who participated in a training intervention, and 2) to examine the relationship between age and extrinsic job satisfaction as a moderator on the influence of a training intervention on producing changes in job satisfaction and career commitment. This chapter supports these purposes by a review of the literature centered on seven areas:

1. Overview of the home care industry
2. Characteristics of the personal care assistant

3. Job satisfaction, career commitment and turnover in healthcare paraprofessionals

4. Interventions aimed to improve the healthcare paraprofessional workforce

5. Relationship between training, career commitment and job satisfaction

6. Age-job satisfaction relationship

7. A theoretical framework to support this study

Home Care Industry

Home care has been part of the U.S. healthcare delivery system since the late 1800s. During that time, the home care agency has transformed itself to meet the changing demands of both the acuity of the care provided and the population served. Today, home care is a diverse and dynamic sector of the healthcare delivery system with approximately 7.6 million individuals currently receive care from 83,000 providers (National Association for Home Care and Hospice, 2008).

The significant growth of home care can be attributed to the shift from inpatient to less expensive outpatient and home healthcare; this shift was supported by improvements in diagnostic tests and surgical procedures, along with patients’ desires to be treated at home (Bureau of Labor Statistics, 2005). Additionally, government financing has played a key role in expanding home care services to those who otherwise would be not be able to afford them, and accordingly, a significant proportion of health services in the U.S. are supported through public programs (Shi & Singh, 2001). According to data from the 2000 National Home and Hospice Care Survey, Medicare was the primary payment source for most home care patients (52 percent) followed by Medicaid (20 percent).
With over two-thirds of all home care paid by public programs, there is an economic interest in the efficiency and effectiveness in the delivery of home care.

*Home Care Services Reimbursement*

Medicare and Medicaid provide reimbursement for both institutional care and home and community-based care (HCBC). Medicare will pay for skilled care in a skilled nursing facility after an acute episode requiring a hospital stay up to the first 100 days of rehabilitative services. Medicare will also pay for some home care if it requires skilled nursing and/or rehabilitative services. However, despite this use of Medicare funds for long-term care services, the program was not designed to be a payer of long-term care services. Medicaid, on the other hand, is designed to be the long-term care “safety net” by providing beneficiaries the opportunity to receive institutional care on a permanent basis. The benefit provides for millions of people who otherwise would go without the long-term care they require. Unfortunately, the cost to provide this benefit is significant. According to the MetLife Market Survey of Nursing Home and Home Care Costs (2006), the average daily cost of a private nursing home room is $206 or $75,190 annually, and for a semi-private room, average daily rate is $183 or $66,795 annually.

In 2002, $179.6 billion was spent nationally on long-term care (Health Policy Institute, 2004). Of that amount, Medicare paid 17 percent and Medicaid paid 47 percent. Over the past three decades, Medicare has become the primary payer of short-term post-acute care (Decker, 2005). In 1985, Medicare represented 11 percent of all discharges and by the year 2000 that proportion has increased to 39 percent. Directly proportional to this Medicare primary payer increase is the increase in nursing home discharges. For
example, in 1977, the number of discharges per 100 nursing home beds was 86. By 1999, the discharge rate increased to 134 per 100 beds representing a 56 percent increase (Decker, 2005).

By contrast, in 2004, the federal government’s share of Medicaid reached $176 billion, making up 13 percent of the mandatory spending of the federal budget (Congressional Budget Office, 2005). Total Medicaid expenditures increased by one-third from $205.7 to $275.5 billion between fiscal year 2000 to 2003 (Holahan & Ghosh, 2005). In order to provide a cost-effective mechanism, Medicaid provides States the right to develop home and community-based care (HCBC) programs financed through Medicaid Waivers, the personal care state plan options, or state-only funds where there is no match of federal dollars (Stone & Wiener, 2001). A Medicaid Waiver is when a state program requests a waiver of certain federal Medicaid requirements - one of which is statewide program coverage - to establish new programs to either a geographically or medically-need specific population. A personal care state plan option is a program similar to waivers; however, it is available to all categorically eligible groups of Medicaid beneficiaries.

Medicaid Waiver for Home and Community-Based Care

Despite social and legal pressures on all state Medicaid administrations to “rebalance” their long-term care system from institutional care to HCBC, long-term care services have historically remained biased towards institutional care rather than community living (Harrington et al., 2000; Kitchener, Ng, & Harrington, 2007). This pressure to fund more HCBC alternatives to institutional care has been taking place for
decades to address unnecessary institutionalization and unmet need for HCBC (Kitchener & Harrington, 2004; Kaiser Family Foundation, 2001).

The Medicaid waiver programs are required by the federal government to be cost-neutral (cost no more than institutional care would for a Medicaid recipient). However, due to the rising costs of healthcare and the increase in demand discussed earlier, the utilization and costs of these waiver programs continues to increase. According to the Health Policy Institute (2004), in fiscal year 2003 home and community-based waiver programs accounted for two-thirds of Medicaid spending for non-institutional care. Furthermore, their research shows a significant increase over the past decade for waiver spending, from 5 percent in 1991 to 22 percent in 2003. This increase in overall Medicaid expenditures for home care is illustrated in figure 2.

The expansion of the Medicaid Wavier programs for HCBC in recent years combined with the predicted growth in demand will force policy makers, providers, and consumers to more closely examine this sector of the healthcare delivery system to increase its efficiency and effectiveness. One aspect of this examination will focus on the personal care workforce including current characteristics, wages, roles, abilities, and training. In sum, the health and long-term care policies at the federal and state levels significantly affect the recruitment and retention of the frontline, paraprofessional workforce, influencing employer and employee decisions through reimbursement, regulations, and program design (Stone & Wiener, 2001).
Characteristics of the Personal Care Assistant

The paraprofessional healthcare workforce is highly fragmented, which is deeply rooted and is reflected by the fact that each sector has its own funding, policy service and advocacy systems (National Direct Service Workforce Resource Center, 2008). There is
no one common term for personal care assistants providing Medicaid waiver services; however, there are two accepted terminologies for this occupation found in the 1998 Standard Occupational Classification (SOC), which match up closest with the role of the PCA providing Medicaid waiver services. The classifications and definitions are as follows:

1. Home Health Aides (SOC 31-1011)
   Provide routine personal healthcare such as bathing, dressing, or grooming, to elderly, convalescent, or disabled persons at patient’s home or residential care facility.

2. Personal and Home Care Aides (SOC 39-9021)
   Assist elderly or disabled adults with daily living activities at person’s home or daytime non-residential facilities. Duties may include keeping house and preparing meals. May also provide meals and perform supervised activities at non-residential care facilities.

Beyond the ambiguity of a clear vocation classification, the PCA is unique from its counterpart, the nursing aide working in an institution. The similar characteristic for all paraprofessionals across any healthcare setting is that women overwhelming are the gender majority. The differences include the demographics of both age and ethnicity. With regard to age, home care aides, on average, are older than nursing home aides and hospital aides (Montgomery, Holley, Deichert & Kosloski, 2005; Yamada, 2002). According to the work of Montgomery and colleagues (2005), the mean age of home care workers is 46, 10 years older than that of nursing home aides and hospital aides.
Additionally, their research revealed that the proportion of home care aides under the age of 25 (8.4 percent) is smaller than that of nursing home (21.8 percent) or hospital (16.2 percent) aides and the proportion of home care workers over the age of 65 is roughly tripled (9.8 percent) in comparison to hospital (3.6 percent) and nursing home (3.2 percent) aides.

The other distinguishing characteristic of PCAs among the population of healthcare paraprofessionals is the proportion of minorities. The home care industry tends to have somewhat fewer African American workers and proportionally more Hispanic or Latino workers with approximately half of the workforce classified as non-white (Montgomery, Holley, Deichert & Kosloski, 2005). Additionally, home care workers are more likely to be foreign born and less likely to be a U.S. citizen (Yamada, 2002).

Another demographic characteristic of PCAs that sets them apart from both hospital aides and nursing aides is education. Yamada’s research (2002) using the Current Population Survey (CPL) from 1997 to 1999, documented an overall improvement in educational attainment from the previous decade (CPL 1987 to 1989) for all three types of healthcare paraprofessionals; however, home care PCAs still had less education than other healthcare paraprofessionals. Of the PCAs surveyed by Yamada, approximately 40 percent were high school graduates and another one-third reported they did not graduate high school. Only 22 percent reported to have some college.

Lastly, an important characteristic of PCAs that must be considered when attempting to draw comparison to other healthcare paraprofessionals is socioeconomic
status in terms of income. According to the State Chart Book on Wages for Personal and Home Care Aides, 1996-2006 (2008), over the period 1999-2006, national median wages for PCAs increased 14 percent or an average of 2 percent per year from $7.50 to $8.54. However, after adjusting for inflation, real wages declined by 4 percent from $7.50 to $7.17. Montgomery, Holley, Deichert and Kosloski (2005) described the home care worker profile by examining the Public Use Microdata Sample (PUMS) of the 2000 Census. Their study reveled that of the three types of healthcare paraprofessionals, hospital aides fared best with regard to annual wages, followed by nursing home aides, and then home care aides. Approximately 25 percent of home care workers were found to be below the poverty line (Montgomery, Holley, Deichert & Kosloski, 2005) and in nearly 60 percent of states (29) the average hourly rate was below the 200 percent Federal poverty line for individuals in one-person households working full-time (PHI National Clearinghouse for on the Direct Care Workforce. 2008).

The distinguishing characteristics listed above illustrate the need for specialized interventions for home care PCAs. Furthermore, these differences between PCAs and their institutional setting counterparts, hospital nurse aides and certified nurse aides, require interventions that more specifically addresses the unique challenges of the home care setting, as well as, the unique demographic characteristics of today’s PCA including, being older, having less education, and receiving lower wages.
Job Satisfaction, Career Commitment and

Turnover in Healthcare Paraprofessionals

The relationship between job satisfaction and turnover among healthcare paraprofessionals has been well established in the research literature (Waxman, Carner, & Berkenstock, 1984). Staff turnover is one of the greatest challenges in both home care and nursing homes (Bowers, Esmond, & Jacobson, 2003; Ellenbecker 2004) due to the direct association reported between turnover and work strain, burnout and stress (Hayes, O’Brien-Pallas et al., 2005). Work strain, burnout and stress have been linked to negative job satisfaction outcomes (Cohen-Mansfield, 1995), as well as a lack of opportunity for career advancement (Riley, Rolband, James & Norton, 2009). Job satisfaction is a key factor in turnover for healthcare paraprofessionals (IOM, 2001; Capitman, Leutz, Bishop, & Casler, 2004; Castle, Degenholtz, & Rosen, 2006), as well as, an important issue in providing care, as it has been inversely related to high levels of staff turnover (Ellenbecker 2004; Karsh, Booske & Sainfort, 2005; Sikorska-Simmons 2005; van den Berg, Landeweerd, Tummers, & van Merode, 2006). A further consequence of high staff turnover is its inverse relationship to quality of care (Zimmerman, Gruber-Baldini, Hebel, Sloane & Magaziner, 2002; Castle & Engberg 2005). Despite these findings, very little attention has been paid to the availability and quality of the workforce that provides home health services and support (Stone, 2004). Moreover, only a few studies have explored job satisfaction of nurse aides and its importance (Castle, Engberg, Anderson & Men, 2007; Castle, 2007). Likewise, there are few studies exploring job satisfaction of PCAs providing home care. This study will
expand the understanding of PCAs providing home care and their job satisfaction and career commitment.

Just as with job satisfaction, career commitment of paraprofessional healthcare workers is not well represented in the recent literature. One recent qualitative study conducted Bishop et al. (2008) found that nurse aides’ job commitment remains at the basic level: satisfaction with benefits and advancement opportunities, and to some extent wages. Other research on career commitment and job satisfaction found that among nursing assistants, intrinsic factors were significantly related to career commitment (Drebing, McMarty, Lombardo, 2002). This finding supports the notion that interventions should focus on increasing intrinsic job satisfaction, which in turn may increase career commitment and reduce turnover.

Reducing turnover of the paraprofessional healthcare workforce across all care settings is of paramount importance. Paraprofessional turnover in U.S. nursing facilities ranged from 48 percent to over 100 percent in 2001 (American Health Care Association, 2002). The Homecare Salary and Benefits Report of 2000-2001, a national survey of home healthcare agencies, identified a 28 percent turnover rate among PCAs in 2000, up from 19 percent in 1994 (Hospital & Healthcare Compensation Services, 2000). This increase is particularly disconcerting when coupled with the increased demand projected by the Bureau of Labor Statistics (2005) which stated that nursing aides, orderlies and attendants, and home health aides are among the occupations adding the most new jobs between 2004 and 2014, about 675,000 combined. Furthermore, occupations with the most replacement openings like those of healthcare paraprofessionals are usually large,
with high turnover stemming from low pay and status, poor benefits, low training requirements, and a high proportion of young and part-time workers.

The demands of providing home care are unique as compared to providing those same care tasks in long-term care facilities. The home is intimate, personal, private, and has the potential to generate issues that would otherwise be non-existent in a nursing facility. This home environment isolates the PCA from the support network that could be readily found in an institutional setting. Healthcare paraprofessionals in institutional settings have structural support of both peers and supervisors, whereas the PCA providing services in the home is in an individual setting without the support of easily accessible peers or staff. This lack of supervisory support can often result in a perceived lack of encouraging and supportive culture in the work unit, which has been found to be a factor among paraprofessional nurse aides which predicts sickness absence (Eriksend, Bruusgaard & Knardahl, 2003). This isolation is in direct contrast to the accepted concepts of ‘supportive leadership’ or ‘systematic clinical supervision’ that has been found to be an important component of nurse aid satisfaction (Olsson, Bjorkhelmi, & Hallberg, 1998; Buelow, Winburn, & Hutherson, 1999). Unfortunately, these concepts of leadership and supervision have not been widely applied in home care due to the cost of implementation and a lack of commitment by the home care industry. This is due in large part by the Medicaid reimbursement framework that creates a system in which employers are unable to pass on the cost of training to consumers, and thus, employers are reluctant to invest more than the required minimum in the orientation and continued training of their workers (Stone, Dawson, & Harahan, 2004).
Another aspect of isolation in home care that impacts the PCA is the physical strain inherent in providing care to the elderly and disabled, especially as it relates to transferring and toileting. Seeking assistance from another PCA is rarely possible, as almost all home care is provided by one PCA at a time. This lack of physical support has been shown to increase the prevalence of back pain by home care nurses as compared to nurses that are facility-based (Knibbe & Friele, 1996). The overall lack of physical support contributes to the poor working conditions. The isolation in providing home care transcends across all levels of this healthcare setting including systematic support, direct supervision support, peer support, association support, and lastly, support from the public at large – quite frankly, the public does not view this work as admirable.

Basic care giving, defined as the assistance with Activities of Daily Living (ADLs), is not valued by society when provided by a formal, paid provider. In fact, the public views this work as unskilled and menial (Stone & Wiener, 2001). This is evident by low wages, lack of health insurance, and lack of a pension experienced by most PCAs. Because most workers in the U.S. obtain health insurance and retirement benefits through employment, jobs that do not offer these benefits may inflict considerable financial hardship on workers, and their families, especially in single-earner households (Kalleberg, Reskin & Hudson, 2000).

On a daily basis, the PCA faces many obstacles in fulfilling their role that go beyond the work itself. Being a low wage earner contributes to the overall stress of these healthcare paraprofessionals. It is well documented that stress detrimentally affects
levels of job satisfaction, job performance, and intent to leave. The intervention for this study addressed stress with modules on improving coping skills and problem solving.

Interventions Aimed to Improve the Healthcare Paraprofessional Workforce

Only recently have policymakers and employers attempted to address the workforce crisis by improving the quality of the job. Chandler’s work provided evidence that nurses’ perceptions of their access to opportunities, information, support, and resources empowered them to develop productive work behaviors (Chandler, 1991). Such interventions include initiatives such as Medicaid-funded “wage pass-throughs” to raise pay for PCAs, specialized training, and career ladder programs that give PCAs a way to advance without leaving the profession (Paraprofessional Healthcare Institute, 2004). According to the National Survey of State Initiatives on the Long-term Care Direct Care Workforce (National Clearinghouse on the Direct Care Workforce and the Direct Care Workers Association of North Carolina, 2005), 29 states reported the direct care workforce as a serious issue; however of those 29, only 20 (68.9 percent), undertook some type of major initiative in 2004. The study reported that the most common initiatives were as follows:

- Direct Care Worker Career Advancement Initiatives (nine states, 31 percent)
- Task Force or Commission Formation (eight states, 27.6 percent)
- Public Awareness Campaign (seven states, 24.1 percent)
- Research Studies (seven states, 24.1 percent)
- Quality Improvement Initiatives (seven states, 24.1 percent)
• Wage or Benefit Enhancement (five states, 17.2 percent)
• Other Types of Initiatives (eight states, 27.6 percent)

Many of these efforts are supported by grants from the Centers for Medicare and Medicaid Services (CMS) under the New Freedom Initiative to improve the direct care workforce and by the Robert Woods Johnson Foundation, Better Jobs Better Care initiative. Some states are also using civil penalty monetary funds to benefit the healthcare paraprofessional workforce. The use of these funds to benefit workforce issues is expected to increase, as states looks for more creative and sustainable ways to improve the workforce issues.

The Better Jobs Better Care initiative was designed to bring about changes in long-term care policy and practice to improve the healthcare paraprofessional workforce across all long-term care settings. This initiative awarded eight research projects and five demonstration projects. One demonstration project in particular is very similar to the intervention for this study, North Carolina’s Win a Step Up program. This 33-hour training curriculum focuses on both clinical and interpersonal topics with the goal of strengthening the healthcare paraprofessional workforce. Specifically, the training content which overlaps with this study’s curriculum included advanced communication, being part of a team, and stress coping strategies (Morgan, Haviland, Woodside, and Konrad, 2007). The training did lead to a modest reduction in turnover, improved job performance, and improved quality of teamwork (BJBC, 2008). Additionally, a comparison of those who participated to those that did not participate in the Win a Step
Up training indicated that the training strengthened perceptions of direct care as a career, rather than just a job (Konrad & Morgan, 2006).

Other Better Jobs, Better Care demonstrations relevant to this study include Ohio’s study which interviewed PCAs and their supervisors on issues related to education, training, racism on the job, commitment to the field and factors related to job satisfaction (Blenkner & Rose, 2006) and Michigan’s Operation ABLE, which examined whether older workers are ready, but untapped, source to alleviate the pending paraprofessional healthcare workforce crisis (Kosniewski & Hwalek, 2006).

In a research synthesis by Harris-Kojetin, Lipson, Fielding, Kiefer, and Stone (2004), an evaluation of initiatives to improve the recruitment and retention of healthcare paraprofessionals conducted over the past few years, found eight themes in the types of initiatives offered, which are as follows: peer mentoring, enhanced staff-family communication, career ladders, alternative management practices, wage enhancements, multi-faceted initiatives, culture change, and family and friends as an alternative labor supply. Furthermore, the report focused on replicating projects that were firmly grounded in evaluation and the ability to accurately measure recruitment and turnover. Of these various types of interventions, those classified as peer mentoring, multi-faceted, or those that dealt with culture change were most noteworthy of replication.

Most initiatives have taken place only recently, and therefore, it is difficult to determine how successful these initiatives have been thus far in recruiting and retaining PCAs. Some early successes of initiatives to improve the healthcare paraprofessional workforce can be found in those states that also measure turnover. Of the 11 states that
reported measuring turnover in the most recent National Survey of State Initiatives on the Long-term Care Direct-Care Workforce (National Clearinghouse on the Direct Care Workforce and the Direct Care Workers Association of North Carolina, 2005), only three were collecting data from the home care setting. Of those three, data are only available for two, Maryland and North Carolina. Maryland was successful in reducing turnover from a rate of 48 percent in 2001 to 37 percent in 2004. North Carolina was very successful in reducing turnover from 53 percent in 2000 to 37 percent in 2002. However, the cause for these statewide drops in turnover are most likely not due to one single strategic initiative and more possibly, at least in part, due to larger employment trends experienced by the states during the time of the survey including the fluctuation of overall unemployment. This is clearly illustrated in the most recent data collection, which indicated a substantial one-year increase in turnover of 49 percent in 2003 for North Carolina (Konrad, 2003). This spike clearly illustrates the difficulties in the sustainability of these initiatives to maintain low-turnover for this workforce, and presents a significant challenge to future interventions and their ability to not only increase retention, but to maintain it over the long-term.

The Intervention: Enhanced Care Assistant Training (ECAT)

The “Enhanced Care Assistant Training: Recognition, Respect, and Responsibility” is a 40-hour training curriculum directly targeted to PCAs providing Medicaid home- and community-based personal care services in Virginia. This project was supported by a subcontract from the Virginia Department of Medical Assistance Services, the Statewide Medicaid agency who administers the Medicaid waiver programs,
under a “Real Choice Systems Change” grant from CMS. The theoretical framework for the design of this curriculum was grounded on Bandura’s Theory of Self-Efficacy. Bandura states that perceived self-efficacy is the belief in one’s capabilities to organize and execute the course of action required to produce given attainments (Bandura, 1997). This training intervention was designed to identify for participants the steps to provide quality care, and provide the skills to successful execute the steps. Using Bandura’s self-efficacy framework, the training intervention was designed to enhance the skills and knowledge of the PCA, and thereby provide the PCA with the capability to organize and execute the course of action to achieve the goal of providing quality care. When PCAs perceive that they can successfully attain this goal, they will then execute the course of action to produce the given attainment. If the attainment is reached, the result is an increase in perceived self-efficacy, and in the case of work performance, an improved sense of job satisfaction. This increase in job satisfaction can then lead to the long-term goal of increasing PCA retention. Moreover, the goal of this curriculum was to increase an individual’s sense of professionalism and self-efficacy by stimulating a sense of empowerment to overcome the challenges of the work. In addition, the training was designed to assist participants in developing better coping mechanism in response to job-related stressors, life stressors, and other obstacles to providing quality personal home care, as well as, encourage, empower, and influence participants to believe in their own abilities to communicate effectively with family members, supervisors, and clients. By enhancing one’s belief in their own abilities and providing strategies to cope with stress, this training intervention has an overarching goal of improving job satisfaction and
consequently, retention. Coogle, Parham, Jablonski, & Rachel (2007) suggest that there is an advantage to developing curricula that focus on practical values, e.g., enhanced professionalism, coping strategies, and optimal team functioning, rather than clinical skills only. This study is founded in the theoretical assumption that if training content seeks to improve one’s sense of vocational self-efficacy, the training will have an effect on positively changing reported levels of career commitment and job satisfaction.

This training intervention was carried out twice - once during July and August of 2002, and again in April and May of 2003. The first offering of this intervention utilized the V-Tel network, a network of “real-time” video teleconferencing originating from one broadcast site to six satellite sites across the Commonwealth of Virginia. Dr. Rita Jablonski was the master trainer and taught all four training modules with each satellite site having its own site coordinator to assist and facilitate with group exercises and discussions. Simultaneously, the training was being recorded and used for the second offering of the training intervention utilizing in-class VHS video players with site coordinators.

Dr. Jablonski, formerly of the Virginia Commonwealth University School of Nursing developed the curriculum. Dr. Jablonski also had guidance and input from an advisory group made up of major stakeholders within the Virginia long-term care and home healthcare industry including Virginia home care association representatives, home health nurses and administrators, and representatives from the Virginia Department of Medical Assistance Services. The curriculum was designed with a focus on interpersonal elements of self-improvement (such as communication skills, enhancing relationships
with supervisors, working more effectively with family members) (Pillemer, Hoffman, & Schumacher, 2001; Pillemer, Meador, Hoffman, & Schumacher 2001a; Pillemer, Meador, Hoffman, & Schumacher, 2001b; Purtillo & Haddard, 1996). While examining other curricula, Dr. Jablonski noted several limitations including the unique problems experienced by PCAs providing care in the home. For example, during the trainings, participants spoke often of the universal struggle to satisfy the care recipients, as well as the family members who employ the PCAs. Anecdotal evidence also discovered during the training found that training participants also expressed great concerns when family members request services outside the PCAs’ scope of work, abilities, or training of the PCA.

The curriculum was separated into four 7-hour training modules, in order to address the eight major themes of the training: working with difficult families; working with patients who exhibit disruptive and resistive behavior; death and dying; burnout; sexuality; building good working relationships with peers and supervisors; spirituality; and ethical issues as they relate to death, dying and disruptive behavior. The four curriculum modules are as follows:

Module 1: "Talking the Talk: Ways to Smooth Out Problems Without Getting Into More Trouble."

This module contains information on communication challenges, professionalism, and working with difficult families. To increase one's sense of self-efficacy, one must feel equipped with the tools necessary to manage difficult situations and resolve conflict. The ability to communicate effectively empowers the individual to maintain a sense of
control when dealing with conflict and/or difficult situations. Control is central to human lives as it impacts motivation, affective states and actions (Bandura, 1997).

**Module 2: "Mind, Body, & Soul: Challenges of Caring for Clients with Cognitive, Sexual, and Spiritual Needs."**

This module is designed to help PCAs work successfully with clients who require multiple needs, such as cognitively impaired persons. Plus, the content assists PCAs in recognizing the complex needs of elders and provides them with strategies to help PCAs meet those needs and refer to other professionals as appropriate. Again, coupled with the content of Module 1 on communication, this module provides knowledge of how to better meet the needs of medically complex individuals. PCAs were expected to gain an enhanced sense of control, and therein increased sense of self-efficacy.

**Module 3: "It's OK to Become Attached to Your Clients: Dealing with Loss, Death, and Mourning."**

This module was intended to help PCAs understand the multiple losses experienced by older adults and provide PCAs with concrete ways of working with other's losses as well as their own feelings surrounding death. By validating, and therefore, permitting the expression of loss and grief, PCAs should become empowered to better handle death and morning.

**Module 4: "Avoiding Burnout: Caring for Others by Caring for Ourselves."**

This module helps PCAs to recognize burnout, avoid it, and lessen its impact if it occurs. Self-care allows for a greater sense of control over one’s environment, and
thereby, provides PCAs with the ability to better manage and cope with job-related stressors. This increased ability to cope is key in building a greater sense of self-efficacy. In addition to the 28-hours of didactic training, the ECAT curriculum also included 12-hours of self-study, separated into three 4-hour blocks, assigned between each module. Each self-study assignment included a review of the module learning objectives, the formulation of a personal goal based on the learning objectives, a timetable in which to achieve the goal, and the steps to be taken to achieve the goal. This series of assignments comprised the Progressive Action Planning process for ECAT. Once the training participant developed their own action plan by applying the knowledge gained in each of the training modules to their work, the training participant was asked to engage in peer mentoring with other PCAs to pass on their knowledge and their experience, and share their knowledge and experiences with their supervisor (Rachel, Young et al., 2004).

Relationship between Training, Career Commitment, and Job Satisfaction

The quality of long-term care defined as the care recipients’ clinical and functional outcomes and quality of life is significantly influenced by the attributes these workers bring to their caregiving jobs, the education and training they receive, and the quality of their jobs (Stone, Dawson & Harahan, 2004). Given the degree to which job satisfaction can negatively impact healthcare delivery, gaining a better understanding of the factors affecting job satisfaction is critical in order to develop and implement workplace interventions to enhance job satisfaction and reduce turnover (Menne, Ejaz, Noelker, & Jones, 2007; Ejaz, Noelker, Menne, & Bagaka, 2008). One particular type of intervention to improve the quality of the paraprofessional workforce is training. There is
data to suggest that specialized training can improve the retention of paraprofessional staff (Grant, Kane, Potthoff, & Ryden, 1996; Konrad & Morgan, 2006).

The qualifications and training requirements for individuals who work as personal care or home care aides are not regulated by the federal government, are typically minimal, and vary from state to state (Stone, Dawson & Harahan, 2004). In Virginia, specifically, personal care aides providing home care to Medicaid Waiver recipients are required to complete a 40-hour, pre-approved by the Department of Medical Assistance Service, training curriculum taught by a licensed registered nurse. The curriculum content includes the biological, physiological and psychological aspects of aging, personal care, rehabilitation, home management including safety and accident prevention, nutrition, meal preparation, and documentation.

Other data point to the advantages of specialized training as it helps direct care staff deal with job-related stress (Schonfeld, Cairl et al., 1999), increases job satisfaction (Braun, Suzuki, Cusick, & Howard-Carhart, 1997), decrease absenteeism (Maas, Buckwalter, Swanson, & Mobily, 1994), and reduce burnout (Austrom, 2000). The training curriculum of the various specialized training included topics such as individualized goals and activities, identification of problem behaviors, behavioral management techniques, communication strategies, environmental modification, coping with stressors, and suggestions for stress management. Additionally, the lack of training leads to insufficient competence regarding work tasks which has been shown to be a source of strain and stress for nursing personnel (Morgan, Semchuk, Stewart & D’Arcy, 2002).
This study evaluated a specialized training intervention designed to increase the job satisfaction and career commitment of PCAs providing home care under a Medicaid Waiver program. Specifically, the training intervention was designed to improve the problem-solving skills, communication tactics, conflict management, and stress management to provide an overall sense of increased professionalism by empowering the PCA to feel recognized and respected. This training content differs greatly from that of typically prescribed certified nurse aide training that is required to work in Medicare or Medicaid reimbursed nursing homes. The content of certified nurse aide training is generally focused on clinical skills and direct patient care tasks, and therefore, does not expose entry level nurse aides to the communication, decision-making, interpersonal and problem-solving skills they will need to effectively interact with patients (Dawson & Surpin, 2001).

Age-Job Satisfaction Relationship

Few well-developed models of the relationship between age and job satisfaction exists (Kalleberg & Loscocco, 1983). In large part, this is due to the considerable controversy found in the research on how age impacts job satisfaction in both shape (Kacmar & Ferris, 1989) and strength of the relationship (Bernal, Synder, & McDaniel, 1998). For example, Rhodes (1983) conducted a meta-analysis on the relationship of age and job satisfaction and concluded that overall job satisfaction is positively associated with age; conversely however, equal evidence found a U-shaped relationship (Handyside, 1961) or failed to demonstrate statistically significant relationships (Weaver, 1978). Despite these contrary finding, research does provide evidence that a positive
linear relationship exist between age and job satisfaction. The research of Miller and Form (1951) suggested that a positive relationship exists between age and job satisfaction, as did the work of Bernal, Synder and McDaniel (1998). Both researchers found that as an individual advances in age, a greater level of job satisfaction is reported. This can in part be due to, more job opportunities, advancement opportunities, increase power and/or an increase in status. This increase in opportunities, power and status results in an increase in one’s prestige and confidence, which contributes to a greater level of job satisfaction.

Other research shows that perhaps the job satisfaction instruments were too broad and general in nature, and therefore, resulting in contrary findings. This is evident by the work of Kacmar and Ferris (1989), who used the Job Descriptive Index, which includes five dimensions of job satisfaction (work, supervision, pay, promotions, and coworkers), and found that after dividing up the index dimensions between intrinsic job satisfaction (work) and the extrinsic job satisfaction factors (supervision, pay, promotions, and coworkers), older workers reported higher levels of intrinsic job satisfaction. The researchers concluded that this was the one form of satisfaction that is under the control of the individual. These finding provide a foundation and rationale for separating the intrinsic and extrinsic job satisfaction components when examining job satisfaction and age. Furthermore, it provides support for the contention that older participant age groups will report higher levels of job satisfaction than younger participant age groups both prior to and after the training intervention. Recent research shows that an increasing degree of complexity and control by providing workers with more possibilities to make decisions
may be a way to maintain perceptions of remaining opportunities at work, especially among older workers (Zacher & Frese, 2009).

Other findings provide evidence that the original contradictory findings on the shape of the relationship between age and job satisfaction may both be correct. The U-shaped model between age and job satisfaction exists when looking at extrinsic job satisfaction, whereas findings that suggest a positive linear relationship when looking at only intrinsic job satisfaction (Kacmar & Farris, 1989). This evidence is the rationale for separating the intrinsic and extrinsic job satisfaction components when examining job satisfaction and age in the present study.

Theoretical Framework

Understanding certain demographic characteristics of training intervention participants and how those characteristics might influence a training intervention’s efficacy to positively change job satisfaction and career commitment is vital when seeking to develop training interventions to improve retention and decrease turnover. In order to maximize the effectiveness of a training intervention, it is important to understand the relationship between participant’s demographic characteristics, like age, and how these characteristics might impact the influence of a training intervention to positively change job satisfaction and career commitment. Likewise, it is also important to note that most training interventions do not address extrinsic job satisfaction factors such as pay, promotion, and supervision. Therefore, in order for a training intervention to improve overall job satisfaction, it must address and positively impact intrinsic job satisfaction while levels of extrinsic job satisfaction are maintained. The theoretical
framework for this study is based on the work of Albert Bandura and his theory of Self-Efficacy. The theory of Self-Efficacy grounds this theoretical framework and explains the intrapersonal changes that an individual must go through for a training intervention to change job satisfaction and career commitment.

**Self-Efficacy Theory**

In Albert Bandura’s text, “Self-Efficacy: The Exercise of Control” (1997), he states that beliefs of personal efficacy are the most central and pervasive mechanism for personal agency, where personal agency refers to acts or actions taken are done intentionally. In other words, Bandura’s theory of self-efficacy is built on the notion that unless people believe they can produce desired effects by their actions, they have little incentive to act. This assumption, therefore, places significant emphasis on the power of efficacy belief and its role in being a major basis for action. Furthermore, personal beliefs can influence other aspects of decision-making including:

- The course of action people choose to pursue
- How much effort they put forth
- How long they will persevere in the face of obstacles and failures
- How much stress and depression they experience in coping with taxing environmental demands

All of these components in the decision-making process are affected by one’s sense of self-efficacy, i.e., the beliefs in one’s capabilities to organize and execute the course of action required to produce a given attainment (Bandura, 1997). Bandura identifies three essential components of self-efficacy:
• The individual’s estimate of personal capability to perform the task in the given environment
• The individual’s feelings of increasing confidence
• The individual’s belief system that enables the person to control his/her thoughts and actions

Therefore, empowering an individual with information to identify and reduce the deleterious effects of stressors is the key to developing the skills that build a stronger sense of self-efficacy. For the purposes of this study’s training curriculum, the focus was on one’s sense of vocational ability, specifically, how to reduce the deleterious effects of job-related stressors of performing the role of the PCA and the training intervention’s impact on improving a sense of self-efficacy.

Theoretical Model

Figure 3 illustrates the theoretical and foundational framework for this study to evaluate the effectiveness of a training intervention to change overall job satisfaction and overall career commitment, while taking into account the effects of age and extrinsic job satisfaction. The model hypothesizes that there are three distinct levels through which a training intervention produces change in a training participant’s job satisfaction and career commitment. The three levels are as follows: 1) Triumvirate relationship between the training intervention, age, and extrinsic job satisfaction, 2) Intrapersonal changes of the training participant, and 3) Outcomes, ultimately a change in overall job satisfaction and career commitment. Overall, the theoretical model attempts to explain four effects: 1) the effect of a training intervention to generate change in job satisfaction and career
Figure 3. Theoretical Model on the Influence of Training Intervention, Age and Extrinsic Job Satisfaction on Job Satisfaction and Career Commitment
commitment of the training participant, 2) the effect of age as a moderator on the influence of the training intervention to produce a change in job satisfaction and career commitment, 3) the effect of preexisting extrinsic job satisfaction as a moderator on the influence of the training intervention to produce a change in job satisfaction and career commitment, and 4) the interaction of age and extrinsic job satisfaction to influence changes in career commitment as a consequence of the training intervention. Each of the effects are designated by a different arrow to illustrate the theoretical pathway by which the training intervention, age and extrinsic job satisfaction first influence vocational self-efficacy, efficacy beliefs, and control, then through each of the constructs of Level 2 – Intrapersonal Changes and ultimately influence the outcome measures of overall job satisfaction and career commitment. This designation of the effects was required to differentiate each of the effects and to delineate that pre-training extrinsic job satisfaction does not influence post-training extrinsic job satisfaction.

As illustrated, the first effect, E1 designated by a bolded arrow, is that the training intervention causes a change in the vocational self-efficacy (judgments of personal capability to organize and execute given types of work performance {Bandura, 1997}), efficacy beliefs (the item-specific tasks and measurements of one’s beliefs that such tasks can be performed {Bandura, 1997}), and control (ability to predict events and shape them to one’s liking {Bandura, 1997}), of the training participant, and subsequently a change in job satisfaction and career commitment. E2, represented by a dash-lined arrow, hypothesizes that age influences a change in vocational self-efficacy, efficacy beliefs, and control of the training participant, and later, a change in job satisfaction and career
commitment. The third effect, E3, illustrated by a dotted-line arrow, hypothesizes that extrinsic job satisfaction influences a change in the vocational efficacy, beliefs, and control of the training participant, and consequently career commitment, intrinsic job satisfaction and overall job satisfaction. Lastly, E4 illustrates that an interaction exists between age and extrinsic job satisfaction to influence a change in vocational self-efficacy, efficacy beliefs, and control of the training participant, and ultimately, a change in career commitment.

The theoretical model of this study begins with level 1 – Triumvirate Relationship. It is proposed that there is a triumvirate relationship between the effects of a training intervention, age and extrinsic job satisfaction. The model illustrates that each of these variables has an effect on the vocational self-efficacy, efficacy beliefs and control of the training participant. Additionally, the model proposes that age influences pre-training levels of extrinsic job satisfaction.

Research suggests that vocational training interventions produce a positive change in overall job satisfaction (Braun, Suzuki, Cusick, & Howard-Carhart, 1997). Other data point to the advantages of training as it helps to deal with job-related stress (Schonfeld, Cairl et al., 1999), as well as improve retention of healthcare paraprofessional staff (Grant, Kane, Potthoff, & Ryden, 1996; Konrad & Morgan, 2006). Additionally, a lack of training leads to insufficient competence regarding work tasks, which has been shown to be a source of strain and stress for nursing personnel (Morgan, Semchuk, Stewart & D’Arcy, 2002).
With regard to the association between age and job satisfaction and career commitment, research shows that age influences intrinsic and extrinsic job satisfaction (Kacmar & Ferris, 1989; Bernal, Synder & McDaniel, 1998), as well as, career identity, career planning, and career resilience (Carson & Bedeian, 1994). The research of Miller and Form (1951) suggested a positive relationship exists between age and job satisfaction, as did the work of Bernal, Synder and McDaniel (1998). Both groups of researchers found that as an individual advances in age, a greater level of job satisfaction is reported. Kacmar and Ferris (1989), who used the Job Descriptive Index, which includes five dimensions of job satisfaction (work, supervision, pay, promotions, and coworkers) found that after dividing up the index dimensions between intrinsic job satisfaction (work) and the extrinsic job satisfaction factors (supervision, pay, promotions, and coworkers), older workers reported higher levels of intrinsic job satisfaction. This suggests that age does influence those forms of satisfaction that are under the control of the individual, specifically, intrinsic job satisfaction, and thereby, providing support for the hypothesis that age impacts overall job satisfaction.

Support for separating intrinsic and extrinsic factors of job satisfaction can be found in the work of Frederick Herzberg and the utilization of his Motivation-Hygiene Theoretical Model, which proposes that intrinsic factors are a source of job satisfaction, while extrinsic factors are a source of job dissatisfaction (Herzberg, 1966). Herzberg proposed two psychological dimensions: “satisfaction–no satisfaction,” and “dissatisfaction–no dissatisfaction.” He argued that the motivator factors contribute to the experience of satisfaction–no satisfaction and the hygiene factors contribute to the
experience of dissatisfaction–no dissatisfaction (Herzberg, Mausner, & Snyderman, 1959). In other words, the opposite of job satisfaction is not job dissatisfaction but no job satisfaction; and similarly the opposite of job dissatisfaction is not job satisfaction (Herzberg, 1968).

Level 2 – Intrapersonal Changes of the training participant is based on Bandura’s theory of Self-Efficacy. Bandura’s theory states that one’s vocational efficacies, beliefs and control change one’s perceived self-efficacy and self-control, as illustrated in the model (Bandura, 1997). Pajares (2002) notes that self-efficacy beliefs are themselves critical determinants of how well knowledge and skill are acquired. The beliefs that individuals hold about their capabilities are often better predictors of what they can do than what they are actually capable of accomplishing (Pajares, 2002). This change in perceived vocational self-efficacy and self-concept results in a change in motivation, which therefore causes a change in effort to take or not to take a course of action to attain a given vocational goal (Bandura, 1997). The application of Bandura’s theory of Self-Efficacy to vocational goals states that the attainment or failure to attain a vocational goal will result in a change in intrinsic job satisfaction, extrinsic job satisfaction, career identity, career planning, and career commitment.

Further support for the application of Bandura’s Self-Efficacy theory, the linkage between self-efficacy, Level 2-Intrapersonal Changes of the model and the construct of career commitment comes from the work of Robbins & Patton (1985) on goal instability. Specifically, the work of Robbins and Patton (1985) states that the inability of the bipolar self to set direction and provide initiative resulted in what they termed goal instability.
Their work led to the creation of the Goal Instability Scale to measure this construct, which was operationalized to include difficulty in setting goals and keeping direction, maintaining drive to get work done, and initiating action. Goal instability relates to self-esteem and to self-concept, which in turn impacts motivation, career planning, resilience and identity (Robbins, 1985). These findings by Robbins support the association between self-concept (Level 2-Intrapersonal Changes) and the career commitment subscales (Level 3-Outcomes).

Other research has shown that goal directedness, perceptions of successful goal attainment, or both are associated with perceptions of self-efficacy (Bandura, 1982) and personal control (Brandstädter, 1989). This association between self-efficacy and successful goal attainment provide support for the linkage between Level 1 and Level 2 of the proposed model. Goal instability also appears to be associated with both self-report and observer indices of career maturity, decidedness or both (Robbins & Patton, 1985; Robbins & Tucker, 1986). Lastly, goal instability has exhibited divergent validity in comparison with other familiar constructs such as personal control (Smith & Robbins, 1989).

Research shows that there is a strong link between attitude and self-efficacy (Ajzen & Madden, 1986; Delcourt & Kinzie, 1993; Regan & Fazio, 1977; Rigges & Enochs, 1993). Additionally, attitude is believed to motivate and guide an individual’s behavior, and there is evidence that attitude predicts behavior (Ajzen & Fishbein, 1980; Ajzen, 1991; Bandura, et al., 1977). Other work also establishes a strong foundation for self-efficacy and individual behavior. The Theory of Planned Behavior establishes a
basis for predicting individual behavior. The theory posits that performance of a behavior is determined by the individual’s feelings and evaluation that the behavior will produce positive consequences. This theory has been used to explain behavioral change in response to training interventions (Fishbein & Stasson, 1990) as well as a range of other behaviors (Ajzen 1996). More recent applications of Ajzen’s theory explicitly operationalize perceived behavioral control, a key concept, using self-efficacy instruments (Godin & Kok, 1996). Perceived behavioral control refers to the person’s perceived confidence in her/his ability to perform a behavior (Ajzen & Madden, 1986), otherwise known as self-efficacy. It is important to note that this level of the model will not be tested in this study. Therefore, caution was exercised when drawing conclusion from the results as it relates to the interpersonal changes which resulted in a change in the study outcomes.

Lastly, level 3 – Outcomes illustrates that the success or failure to attain a vocational goal will result in a change in the subscales of the Minnesota Satisfaction Questionnaire, intrinsic job satisfaction and extrinsic job satisfaction, and of the Career Commitment Measure subscales, career identity, career planning, and career resilience. The change in these subscales will result in a change in overall job satisfaction and overall career commitment, respectively. A detailed explanation of the instrumentation used to measure job satisfaction and career commitment is provided in Chapter three.

In summary, this study hypothesizes that training interventions produce a change in overall job satisfaction and career commitment through a series of intrapersonal changes. In addition, the model proposes a triumvirate relationship between training
interventions, a training participant’s age and pre-training extrinsic job satisfaction to produce a change in overall job satisfaction and career commitment, where an interaction exist between age and pre-training levels of extrinsic job satisfaction. The model proposes this interaction generates a mediating effect on the influence of a training invention to produce change in career commitment.
CHAPTER 3: METHODOLOGY

Introduction

Staff turnover is one of the greatest challenges in both home care and nursing homes (Bowers et al. 2003, Ellenbecker 2004) due to the direct association reported between turnover and work strain, burnout and stress (Hayes et al. 2005). Work strain, burnout and stress have been linked to negative job satisfaction outcomes (Cohen-Mansfield, 1995), as well as a lack of opportunity for career advancement (Riley, Rolband, James & Norton, 2009). Job satisfaction is a key factor in turnover for healthcare paraprofessionals (IOM, 2001; Capitman, Leutz, Bishop, & Casler, 2004; Castle, Degenholtz, & Rosen, 2006), as well as, an important issue in providing care, as it has been inversely related to high levels of staff turnover (Ellenbecker 2004; Karsh, Booske & Sainfort, 2005; Sikorska-Simmons 2005; van den Berg, Landeweerd, Tummers, & van Merode, 2006). Research suggest that specialized training can improve the retention of paraprofessional staff (Grant, Kane, Potthoff, & Ryden, 1996; Konrad & Morgan, 2006).

The purpose of this chapter is to provide specific information outlining the organization of this study to evaluate a training intervention for personal care assistants to change job satisfaction and career commitment. This chapter contains information on the study methodology, instrumentation used to measure job satisfaction and career commitment, and the statistical techniques used to analyze the data.
Methodology Overview

This non-experimental study used secondary data collected during the training intervention, “Enhanced Care Assistant Training (ECAT).” The study sought to determine whether there were differences in pre- and post-training levels of career commitment and job satisfaction between groups based on age and extrinsic job satisfaction. Additionally, the study examined the mediating effect of age and extrinsic job satisfaction as a moderator on the influence of the training intervention to produce a change in overall career commitment and each of the CCM subscales: career identity, career planning, and career resilience, as a consequence of the training.

Research Questions

There are three topics of interest for this study. First, this study examined whether there were differences in levels of career commitment and job satisfaction as a consequence of a specifically designed training intervention among age groups of PCAs providing Medicaid waiver home and community-based care services. To investigate this area, the following four research questions were addressed by this study.

1. Will the training have a significantly different effect on levels of overall career commitment by age group of personal care assistants?

2. Will the training have a significantly different effect on levels of each of the Career Commitment Measure subscales, career identity, career planning, and career resilience, by age group of personal care assistants?
3. Will the training have a significantly different effect on levels of overall job satisfaction by age group of personal care assistants?

4. Will the training have a significantly different effect on levels of each of the Minnesota Satisfaction Questionnaire subscales, intrinsic job satisfaction and extrinsic job satisfaction, by age group of personal care assistants?

Secondly, this study investigated whether there were differences in levels of career commitment and job satisfaction as a consequence of a specifically designed training intervention among various groups of PCAs providing Medicaid waiver home and community-based care services based on pre-training extrinsic job satisfaction. To investigate this area, the following three research questions were addressed by this study.

5. Will the training have a significantly different effect on levels of overall career commitment by extrinsic job satisfaction group of personal care assistants?

6. Will the training have a significantly different effect on levels of each of the Career Commitment Measure subscales, career identity, career planning, and career resilience, by extrinsic job satisfaction group of personal care assistants?

7. Will the training have a significantly different effect on the level of the Minnesota Satisfaction Questionnaire subscale intrinsic job satisfaction, by extrinsic job satisfaction group of personal care assistants?

Lastly, this study examined the interaction between age and extrinsic job satisfaction as a moderator on the influence of a training intervention to produce changes in both
overall career commitment and the CCM subscales: career identity, career planning, and career resilience. To investigate this area, the following two research questions were addressed by this study.

8. Do age and extrinsic job satisfaction of personal care assistants interact to influence changes in overall career commitment as a consequence of the training?

9. Do age and extrinsic job satisfaction of personal care assistants interact to influence changes in the Career Commitment Measure subscales, career identity, career planning, and career resilience, as a consequence of the training?

Instrumentation

*Minnesota Satisfaction Questionnaire*

The evaluation included pre- and post-intervention measurements for career commitment, as well as pre- and post-intervention measurements for job satisfaction. The measurement tool for job satisfaction was the Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis, England, & Lofquist, 1967) which assesses overall job satisfaction and two components of job satisfaction: 1) Extrinsic job satisfaction defined as an individual's satisfaction with supervisor, workplace conditions, and salary, and 2) intrinsic job satisfaction defined as an individual's satisfaction related to achievement, potential for advancement, recognition, and responsibility. This instrument was developed to assess objectives based on the Theory of Work Adjustment, which describes
the relationship of the individual to his or her work environment (Dawis & Lofquist, 1990). This tool uses a 5-point Likert-type scale (1=very dissatisfied; 2=dissatisfied; 3=neutral; 4=satisfied; 5=very satisfied), and thereby, a higher score indicates a higher level of job satisfaction. The MSQ has been shown to be a reliable instrument (Weiss, Dawis, England, & Lofquist, 1967) and also meets validity criteria (Gillet & Schwab, 1975). This instrument has been used extensively in job satisfaction research and used specifically for paraprofessional healthcare workers, nursing assistants, in two prominent studies (Grieshaber, Parker, & Deering, 1995; Waxman, Carner, & Berkenstock, 1984).

**Career Commitment Scale**

The measurement tool for career commitment was the 12-item Career Commitment Scale (CCM), which assesses overall career commitment developed by Carson & Bedeian (1994). This instrument was conceptualized as one’s motivation to work in a chosen vocation. The construction of the measurement tool occurred in three major phases: 1) the construction of an 87 item measure to represent the full range of the career commitment content domain, 2) administration of two sequential pilot studies to test the factor structure of the item pool and the reliability of the intended instrument, and 3) administration of a field test of the instrument to assess convergent, discriminate, and construct validities (Carson & Bedeian, 1994).

A bivariate correlation between the CMM and the work of Blau’s (1985) career commitment measure was .75 after correcting for attenuation in both measures. Discriminate validity was supported through factor analysis results and the correlate relations found generally supports the construct validity (Carson & Bedeian, 1994).
The field test included respondents from various occupations with varying levels of technical training, advanced education, and other professional attributes. Respondents included teaching faculty, computer analysts, nursing assistants, librarians, and personnel managers. The representation of nursing assistants makes this particular instrument applicable for this study to measure the career commitment construct for PCAs.

The result of Carson and Bedeian’s (1994) work was a multidimensional three-factor solution with each factor having a Chronbach’s Coefficient Alpha reliabilities ranging from .79 to .85. The three-factor measurement tool explained approximately 64% of the total variance and no items had even moderate cross-loading on other factors (Carson & Bedeian, 1994). The three subscales of the CCM are career identity, career planning, and career resilience. Career identity is associated with a close emotional connection with one’s career. Career planning is defined as one’s position to determining developmental needs and career goals. Career resilience is one’s ability to withstand career disruption during difficult and/or stressful job-related events. This tool uses a 5-point Likert-type scale (1=strongly disagree and 5=strongly agree), and thereby, a higher score indicates a higher level of career commitment.

Institutional Review Board

An application for exemption from the requirements set forth in the Regulations for Protection of Human Subjects to collect the primary data was submitted to the Virginia Commonwealth University (VCU) Institutional Review Board (IRB) and was approved on February 19, 2002 under the title, “Virginia Geriatric Education Center VCU IRB #02416.” The research study qualified for exemption according to 46 CFR
46.101(b) Categories 1 and 2. For this research study, a separate application for the VCU IRB was submitted for analysis of the secondary data. The present study qualified for exemption according to 46 CFR 46.101(b) Category 4 and was approved on May 31, 2010 under the title, “Evaluation of a Training Intervention for Personal Care Assistants and the Effects of Age and Extrinsic Job Satisfaction: Changes in Career Commitment and Job Satisfaction VCU IRB #HM12871.”

Data Collection

Data were obtained using paper and pencil surveys (see appendix A) administered on-site during the first and last module of each of the two training offerings. The survey captured demographic information, responses to a 20-item MSQ questionnaire and 12-item CCM questionnaire. During Year 1, data was collected from 136 participants. During Year 2, data was collected on 171 participants for a total of 307 participants for this study.

Data Screening and Missing Data

The statistical package, Predictive Analytical Software (PASW) (formerly SPSS) version 17.0, was the program used for data analysis. Data were entered and screened to assure accuracy of the data file and to address missing data. To ensure accuracy of the data file, descriptive statistics were ran to check for out-of-range values, plausible means and standard deviations, and outliers. Missing data can be a frequent problem in research (Horton & Kleinman, 2007). Several options exist for handling missing data and these approaches are selected based on several factors including the size of the data set being
analyzed and the statistical technique being used (Horton & Kleinman, 2007). One commonly accepted approach is mean substitution. In this method, a variable’s mean is calculated based on available observations with completed items and is used to fill in the values of the missing items of other incomplete observations. This method should avoid skewing the data. For this study, observations with missing data of only one or two items on the MSQ or CCM total or subscale were imputed using sample mean. Observations with missing data of three items or greater were not included in the analyses.

Independent Variable Measurement

As stated in the research questions one through four, the independent variable is age groups of training participants. The sample will be divided into five age groups: 18-29, 30-39, 40-49, 50-59, greater than 60. To address the potential for unequal sample sizes using five age groups based on chronological age, Type III, Marginal Sum of Squares was used when the ANCOVA was conducted. Type III provides estimates which are not a function of the frequency of observations in any group, and therefore, is robust when in dealing with unequal sample sizes.

This age group breakdown by approximate decade expands the findings of Coogle, Parham, Jablonski, and Rachel (2007) to more accurately determine at which age differences occur in post-training job satisfaction and career commitment. The theories of adult developmental stages, which describes changes within a developmental continuum, with identifiable behaviors and functions maximal at a particular stage (Loevinger, 1976) is used to provide theoretical justification for the age group breakdown. Specifically, the developmental stages defined in the work of McNeese-
Smith and van Servellen (2000), who examined developmental stage and nurse job satisfaction and organizational commitment, corresponds closely with the approximate age groups defined for this study.

For research questions five through seven, the independent variable is the extrinsic job satisfaction score using the MSQ subscale, extrinsic job satisfaction, as reported by training participants prior to the training. Groups were determined by approximately equal size based on three levels of pre-training extrinsic job satisfaction: high, moderate, and low.

For research questions eight and nine, there are two independent variables, extrinsic job satisfaction and age. Extrinsic job satisfaction groups were determined by approximately equal size based on two levels: high and low. Age groups were determined by approximately equal size and separated into three groups.

Dependent Variable Measurement

The dependent variables in this study are the post-training scores on each of the two instruments, CCM and MSQ, for both overall and their respective subscales. A detailed listing of each of the dependent variables for each research question can be found in Table 1.

Analysis of Data

The statistical technique to test the study hypotheses was the mean differences between groups. To test hypotheses which examine differences, an analysis of variance (ANOVA) was utilized. This statistical procedure is used to compare two or more means
to see if there are any reliable differences among them. However, to test differences between groups after a study intervention, an analysis of covariance (ANCOVA) must be performed in order to account for any pre-intervention reliable mean differences between groups. The ANCOVA procedure is an extension of the ANOVA in which main effects and interactions of the independent variables are assessed after dependent variable scores are adjusted for differences associated with one or more covariates, those variables that are measured before the dependent variable and are correlated with it (Tabachnick & Fidell, 2001). In this study, the covariates are the pre-training variables of overall job satisfaction, extrinsic job satisfaction, intrinsic job satisfaction, overall career commitment, career identify, career planning, and career resilience. For research questions one though seven, a one-way ANCOVA was performed to test mean difference between groups while accounting for the effect of the training intervention by treating the pre-training variables as covariates. This analysis reveals any differences among groups of PCAs in terms of their change in job satisfaction and career commitment as a result of participating in the study intervention. Additionally, two post-hoc examinations were performed. The Least Significant Difference statistic (LSD) was used when the ANCOVA results were statistically significant. The LSD identifies between which of the groups statistically significant differences occurred. The post-hoc pair-sampled t-test was performed regardless of ANCOVA results to examine any statistically significant within group differences.

To examine the interaction between extrinsic job satisfaction and age of personal care assistants to influence changes in overall career commitment and each of the CCM
subscales, career identify, career planning, and career resilience, as a consequence of the training (research questions eight and nine), a factorial ANCOVA was performed. The difference between the one-way and factorial ANCOVA is that factorial analysis allows for multiple independent variables, where as in one-way analyses, there can be only one independent variable (Tabachnick & Fidell, 2001).

Factorial designs are made up of factors and levels. A factor is a major independent variable and a level is a subdivision of a factor. In this study, extrinsic job satisfaction and age are the factors and the breakdown of each of factors, high and low for extrinsic job satisfaction and young, middle, and old for age, are the levels. This is a 3 x 2 factorial design resulting in six groups. Factorial design allow for the testing of both main and interactional effects. A main effect is an outcome that is a consistent difference between levels of factors. An interaction effect exists when differences on one factor depend on the level of another factor (Trochim, 2006). For this study, the factorial design will test for main effects of age and extrinsic job satisfaction to influence changes in career commitment as a consequence of the training intervention. This analysis will also test the interaction effects between various levels of age and extrinsic job satisfaction to influence changes in career commitment as a consequence of the training.

Prior to running the one-way and factorial ANCOVA analyses, certain assumptions of the data set were confirmed. The ANCOVA model assumes normality of distribution, homogeneity of variance, linearity between pairs of covariate (not applicable for this study), linearity between pairs of dependent variables, homogeneity of regression, and reliability of covariates (Tabachnick & Fidell, 2001). To confirm normality, the data
was tested graphically with a histogram to show normal curve. Use of Levene's test of homogeneity of variance confirms the assumption that each group of independent variables has the same variance on an interval dependent. To confirm linearity of data, a scatterplot of the dependent variables and covariates for all groups was performed to show best fit line to illustrate a linear or curvilinear relationship. Homogeneity of regression was tested graphically with a scatterplot using best fit line to show groups have similar slopes. Lastly, it is assumed that in an ANCOVA design, the covariates are measures without error and are reliable (Tabachnick & Fidell, 2001). As previously mentioned, the covariates are the pre-training levels of job satisfaction and career commitment, and therefore, cannot be affected by the treatment (training intervention), as it had not yet occurred at the time of measurement. Therefore, it is justifiable to assume the covariates are reliable.

Limitations

There are limitations to the non-experimental design of this study and use of ANCOVA. First, the use of ANCOVA does not allow for causal inferences, at best, this statistic analysis will only show the relationship between the independent variable and dependent variables adjusted for the effects of the covariates (Tabachnick & Fidell, 2001). In addition, generalizability is limited to the population studied, as this was a convenient sample with no control group or random assignment – all training participants were went through the same training intervention.
Summary

This research study evaluates a specifically designed training intervention to examine the dependent variables of overall and respective subscales for job satisfaction and career commitment, while taking into account the effect of a training participant’s age and level of pre-existing extrinsic job satisfaction. Results have practical application in more effectively improving job satisfaction and career commitment through training initiatives, thereby increasing the number of PCAs recruited and retained. The methodology for this study is non-experimental design using secondary data collected prior to and after the training intervention. ANCOVA statistical analysis was used to examine mean differences among groups, while accounting for the effect of the training intervention by treating the pre-training variables as covariates. The independent variables for this study are age and pre-existing levels of extrinsic job satisfaction. Table 1 provides a list of independent variables, dependent variables, covariates, and statistical analysis.
CHAPTER 4: RESULTS

Introduction

As stated in Chapter 3, the present non-experimental study used secondary data collected during the training intervention, ECAT, to first determine whether there were differences in pre- and post-training levels of career commitment and job satisfaction between groups based on age and extrinsic job satisfaction, and then to examine the mediating effect of age and extrinsic job satisfaction as a moderator on the influence of the training intervention to produce a change in overall career commitment and each of the CCM subscales; career identity, career planning, and career resilience. This chapter describes the results of the analyses and is presented in a three phase approach: (a) description of prescreened data, (b) description of data, and (c) hypothesis testing results.

Description of Prescreened Data

Data was captured using a pencil and paper survey, which included demographic information, and responses to a 20-item MSQ questionnaire and a 12-item CCM questionnaire. Responses were gathered from participants at both the first training session and the last training session. During Year 1, data was collected from 136 training participants. During Year 2, data was collected from 171 training participants for a total of 307 training participants for this study.
An ANCOVA was performed, providing an objective method to test for statistically significant differences between age groups and groups based on extrinsic job satisfaction by adjusting for pre-training differences in the MSQ and CCM measures, which are hypothesized to impact the dependent variables. Additionally, partial eta squared ($\eta_p^2$) was used to gather data on the effect size estimate. The partial eta squared statistic for this study estimates what percentage of change is due to age and extrinsic job satisfaction. Preparation for performing the ANCOVA analyses required testing of the assumptions of the data to include normality of distribution, homogeneity of variance, linearity between pairs of dependent variables, and homogeneity of regression (Tabachnick & Fidell, 2001). When these assumptions are met, an analysis can adjust the group DV means for differences caused by the covariate. Additionally, when assumptions are met, DV variance is reduced, reducing the error term of the resulting statistical model, thus increasing statistical power (Field, 2009).

Normality of the data was tested by visually examining a histogram for skewness or kurtosis. The histograms for each of the DVs were inspected and all showed a normal curve with no significant skewness or kurtosis, and thereby, did not require any transformation. To illustrate the normality of the DVs, the measures for overall career commitment and overall job satisfaction were chosen. Figure 4 illustrates the distribution of the post-training overall career commitment scores.
The distribution of the post-training overall job satisfaction scores was also found to be normal, though it did reveal a larger standard deviation from the mean and hence, a larger kurtosis value of 5.11 than that of the overall career commitment score distribution (see Figure 5). Levene's Test of Equality of Error Variance was conducted to test for the homogeneity of DV variance in the distribution of each group and revealed no significance as illustrated in Table 2.

To confirm linearity of data, a simple scatterplot of the DVs and covariates for all groups was constructed to show the best fit line to illustrate a linear or curvilinear relationship. Additionally, these same simple scatterplots using the best fit line also test for homogeneity of regression of the DV on the covariate to show groups have similar slopes. The overall scores of career commitment and job satisfaction by age group and group based on extrinsic job satisfaction were chosen to illustrate the linearity of the data
Table 2. Levene’s Test of Equality of Error Variance by Group

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>F Statistic</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Career Commitment</td>
<td>Age</td>
<td>$F(4, 224) = 0.62$</td>
<td>.65</td>
</tr>
<tr>
<td></td>
<td>Extrinsic Job Satisfaction</td>
<td>$F(2, 225) = 0.82$</td>
<td>.44</td>
</tr>
<tr>
<td>Career Identity</td>
<td>Age</td>
<td>$F(4, 225) = 1.05$</td>
<td>.38</td>
</tr>
<tr>
<td></td>
<td>Extrinsic Job Satisfaction</td>
<td>$F(2, 226) = 1.35$</td>
<td>.26</td>
</tr>
<tr>
<td>Career Planning</td>
<td>Age</td>
<td>$F(4, 226) = 0.37$</td>
<td>.83</td>
</tr>
<tr>
<td></td>
<td>Extrinsic Job Satisfaction</td>
<td>$F(2, 226) = 2.76$</td>
<td>.07</td>
</tr>
<tr>
<td>Career Resilience</td>
<td>Extrinsic Job Satisfaction</td>
<td>$F(2, 226) = 2.03$</td>
<td>.13</td>
</tr>
<tr>
<td>Overall Job Satisfaction</td>
<td>Age</td>
<td>$F(4, 216) = 2.10$</td>
<td>.08</td>
</tr>
<tr>
<td>Intrinsic Job Satisfaction</td>
<td>Age</td>
<td>$F(4, 221) = 1.80$</td>
<td>.13</td>
</tr>
<tr>
<td>Extrinsic Job Satisfaction</td>
<td>Age</td>
<td>$F(4, 222) = 1.07$</td>
<td>.35</td>
</tr>
</tbody>
</table>

and homogeneity of regression of the DV on the covariate. Figure 6 illustrates the pre- and post-training overall career commitment scores by age group.
Figure 6. Scatterplot of Pre- and Post-training Overall Career Commitment Scores by Age Group

A simple scatterplot using the best fit line for pre- and post-training overall job satisfaction scores by age group is illustrated in Figure 7, which shows a linear relationship.

The second set of simple scatterplots using best fit lines illustrate both the linearity between the pre- and the post-training scores and the homogeneity of regression. Figure 8 illustrates the post-training overall career commitment scores on the covariate, pre-training overall career commitment for each of the extrinsic job satisfaction groups. Figure 9 illustrates the post-training intrinsic job satisfaction on the covariate, pre-training intrinsic job satisfaction scores for each of the extrinsic job satisfaction groups.
Next, to address missing data, mean substitution was performed for those observations having missing data for one or two items on the MSQ and CCM overall totals or subscales for both the pre-training measures (see Table 3). Table 4 shows the number of mean substituted cases for post-training measures. Observations with missing data of three items or greater were not included in the analyses.

Description of Data

Data analysis examining the combined, prescreened data collected from years 1 and 2 revealed that in terms of sex, 96.7% \((n = 297)\) of the training participants were female. Participants ranged in age from 18 to 73, with a mean age of 44.9 years and a
Figure 8. Scatterplot of Pre- and Post-training Overall Career Commitment Scores by Extrinsic Job Satisfaction Group

Figure 9. Scatterplot of Post-training Intrinsic Job Satisfaction by Extrinsic Job Satisfaction Group
Table 3. Mean Substitution of Pre-training Dependent Variables

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Number of Pre-Training Mean Substituted Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Job Satisfaction</td>
<td>18</td>
</tr>
<tr>
<td>Extrinsic Job Satisfaction</td>
<td>19</td>
</tr>
<tr>
<td>Overall Job Satisfaction</td>
<td>25</td>
</tr>
<tr>
<td>Career Identity</td>
<td>9</td>
</tr>
<tr>
<td>Career Planning</td>
<td>11</td>
</tr>
<tr>
<td>Career Resilience</td>
<td>5</td>
</tr>
<tr>
<td>Overall Career Commitment</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 4. Number of Mean Substituted Cases by Dependent Variables

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Number of Post-Training Mean Substituted Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Job Satisfaction</td>
<td>9</td>
</tr>
<tr>
<td>Extrinsic Job Satisfaction</td>
<td>10</td>
</tr>
<tr>
<td>Overall Job Satisfaction</td>
<td>15</td>
</tr>
<tr>
<td>Career Identity</td>
<td>8</td>
</tr>
<tr>
<td>Career Planning</td>
<td>3</td>
</tr>
<tr>
<td>Career Resilience</td>
<td>1</td>
</tr>
<tr>
<td>Overall Career Commitment</td>
<td>11</td>
</tr>
</tbody>
</table>

The mean age of the training participants is in line with findings from Montgomery and colleagues (2005), who found the mean age of home care workers to be 46. A one-way between groups analysis of variance (ANOVA) was
performed to validate that the age groups constructed for this study differed significantly in terms of age. There was a statistically significant difference at the $p < .05$ level in age for the five age groups: $F(4, 301) = 1280, p = .001$. In addition, post-hoc comparisons using Tukey HSD test indicated that the mean age for each age group was significantly different from each age group (see Table 5).

Table 5. Descriptive Statistics by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Percentage of Total</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>$n$</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 29</td>
<td>14.7%</td>
<td>23.8</td>
<td>3.31</td>
<td>45</td>
</tr>
<tr>
<td>30 to 39</td>
<td>19.0%</td>
<td>35.2</td>
<td>2.80</td>
<td>58</td>
</tr>
<tr>
<td>40 to 49</td>
<td>28.8%</td>
<td>45.0</td>
<td>3.03</td>
<td>88</td>
</tr>
<tr>
<td>50 to 59</td>
<td>23.2%</td>
<td>54.5</td>
<td>2.90</td>
<td>71</td>
</tr>
<tr>
<td>60 to 73</td>
<td>14.4%</td>
<td>63.7</td>
<td>3.36</td>
<td>44</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td></td>
<td></td>
<td>306</td>
</tr>
<tr>
<td>Mean Age</td>
<td></td>
<td>44.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Deviation</td>
<td></td>
<td>12.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PCAs of African American decent accounted for over half of the trainees (53%, $n = 162$), followed by a large percentage of Caucasian training participants (40.5%, $n = 124$), The majority of the remaining trainees were Hispanic or Latino (2.3%, $n = 7$), American Indian or Alaskan Natives (1.6%, $n = 5$), or Asian (1.4%, $n = 4$) (see Table 6). These findings are in contrast to those of Montgomery and colleagues (2005), which found proportionally more Hispanic or Latino workers with approximately half of the workforce classified as non-white.
Table 6. Race of Participants

<table>
<thead>
<tr>
<th>Race</th>
<th>Percentage of Total</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black or African American</td>
<td>52.9%</td>
<td>162</td>
</tr>
<tr>
<td>White or Caucasian</td>
<td>40.5%</td>
<td>124</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>2.3%</td>
<td>7</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>1.6%</td>
<td>5</td>
</tr>
<tr>
<td>Other</td>
<td>1.3%</td>
<td>4</td>
</tr>
<tr>
<td>Under-represented Asian subgroup</td>
<td>.7%</td>
<td>2</td>
</tr>
<tr>
<td>Asian</td>
<td>.7%</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>306</td>
</tr>
</tbody>
</table>

About two-thirds (67.2%, n = 205) of the training participants indicated that they were certified nurse aides. Approximately 41% (n = 117) reported being married and 38% (n = 108) reported being single or widowed (see Table 7). A substantial number reported being divorced (17.4%, n = 50) or separated (4.5%, n = 13).

Table 7. Marital Status of Participants

<table>
<thead>
<tr>
<th>Race</th>
<th>Overall</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>40.6%</td>
<td>117</td>
</tr>
<tr>
<td>Single or Widowed</td>
<td>37.5%</td>
<td>108</td>
</tr>
<tr>
<td>Divorced</td>
<td>17.4%</td>
<td>50</td>
</tr>
<tr>
<td>Separated</td>
<td>4.5%</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>288</td>
</tr>
</tbody>
</table>
participants had been employed in their current positions for a considerable number of years \((M = 5.3, SD = 5.9)\) and had dedicated a significant number of years to working in their current career fields \((M = 10.1, SD = 8.5)\).

Hypotheses Testing Results

To test hypotheses one through four, a series of one-way ANCOVAs was conducted to compare changes in career commitment and job satisfaction as a consequence of the training among various age groups of training participants. The independent variable was age of the training participant grouped by approximate decade from 18 to 73 years of age. The dependent variables were post-training scores of the two study measures, the MSQ and CCM, which also included their respective subscales. Training participants’ scores on the pre-training administration of the study measurements were used as covariates in these analyses.

As previously mentioned, data assumption testing for conducting ANCOVAs including normality, linearity, homogeneity of variances, homogeneity of regression slopes, and the reliability of covariates was performed and showed no violations. Statistical significance was determined at an alpha level of 0.05.

**Hypothesis 1.** The change in overall career commitment as a consequence of the training will differ by age group of personal care assistants, with the most improvement shown by the oldest age group (greater than 60), and each younger group (50-59, 40-49, and 30-39) showing decreasingly moderate improvements with the youngest age (18-29) showing the least improvement. The ANCOVA analysis
showed no significant difference between the age groups and their post-training overall career commitment scores, $F(4, 223) = .32, \ p = .87, \ \eta^2_p = 0.01$.

To account for any pre-training differences on the overall career commitment scores, adjusted mean scores were calculated by treating the pre-training scores on the career commitment measures as covariates in preparation for the ANCOVA as found in Table 8.

**Table 8. Adjusted Mean Scores on Overall Career Commitment by Age Group**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Adjusted Mean (Standard Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 29</td>
<td>3.57 (.11)</td>
</tr>
<tr>
<td>30 to 39</td>
<td>3.59 (.10)</td>
</tr>
<tr>
<td>40 to 49</td>
<td>3.68 (.08)</td>
</tr>
<tr>
<td>50 to 59</td>
<td>3.67 (.08)</td>
</tr>
<tr>
<td>60 to 73</td>
<td>3.60 (.11)</td>
</tr>
</tbody>
</table>

The mean scores on overall career commitment of the training participant grouped by age are illustrated using drop-line graphs to show both differences between age groups and within age groups from pre- to post-training. Figure 10 shows a decrease in the overall career commitment scores from pre-training to post-training for the 18-29, 30-39, and 60-73 age groups with a slight increase shown in the 40-49 and 50-59 groups.

A post-hoc paired-sample $t$-test was performed to examine differences within age group in terms of the CCM. A statistically significant decrease was found in overall career commitment score from pre-training ($M = 3.89, SD = 0.56$) to post-training ($M = \ldots$)
Figure 10. Pre- and Post-Training Mean Scores on Overall Career Commitment Measure by Age Group

3.69, $SD = 0.67), t(31) = 2.16, p < .038$ (two-tailed) within the 18 to 29 age group. The mean decrease in overall career commitment was 0.19 ($CI_{95} = 0.01, 0.38$). The eta squared statistic ($\eta^2 = .13$) indicated a moderate effect size using guidelines proposed by Cohen (1988) for interpreting this value defined as: .01 = small effect, .06 = moderate effect and .14 = large effect. Chapter five will provide a detailed discussion of the findings.
Hypothesis 2. The change in each of the subscales of the Career Commitment Measure, career identity, career planning, and career resilience, as a consequence of the training will differ by age group of personal care assistants, with the most improvement shown by the oldest age group (greater than 60), and each younger group (50-59, 40-49, and 30-39) showing decreasingly moderate improvements with the youngest age (18-29) showing the least improvement. There was no significant difference between the age groups and their post-training scores on the CCM subscales \((p > .05)\) (see Table 9).

Table 9. ANCOVA Results for Career Commitment Measure – Age Group

<table>
<thead>
<tr>
<th>CCM Measure</th>
<th>F Statistic</th>
<th>(p)</th>
<th>(\eta_p^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Identity</td>
<td>(F(4, 224) = .20)</td>
<td>.94</td>
<td>.00</td>
</tr>
<tr>
<td>Career Planning</td>
<td>(F(4, 225) = .67)</td>
<td>.61</td>
<td>.01</td>
</tr>
<tr>
<td>Career Resilience</td>
<td>(F(4, 224) = .35)</td>
<td>.85</td>
<td>.01</td>
</tr>
</tbody>
</table>

To account for any pre-training differences on the career commitment measure subscale scores, adjusted mean scores were calculated by treating the pre-training scores on the career commitment measures subscales as covariates in preparation for the ANCOVA (see Table 10). The mean scores on CCM subscales of the training participant grouped by age are illustrated using drop-line graphs. Figure 11 shows a decrease in the career identity scores in the 18-29 and 30-39 age groups with slight increases from pre-training to post-training scores in the 40-49, 50-59, and 60-73 age groups. The mean career planning scores for the age groups also varied, with the youngest age, the 30-39
Table 10. Adjusted Mean Scores on the Career Commitment Measure Subscales by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Career Identity (Adjusted Mean)</th>
<th>Career Planning (Adjusted Mean)</th>
<th>Career Resilience (Adjusted Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 29</td>
<td>4.25 (.09)</td>
<td>3.58 (.16)</td>
<td>2.94 (.19)</td>
</tr>
<tr>
<td>30 to 39</td>
<td>4.24 (.08)</td>
<td>3.59 (.14)</td>
<td>2.98 (.17)</td>
</tr>
<tr>
<td>40 to 49</td>
<td>4.26 (.06)</td>
<td>3.62 (.11)</td>
<td>3.09 (.13)</td>
</tr>
<tr>
<td>50 to 59</td>
<td>4.32 (.06)</td>
<td>3.50 (.12)</td>
<td>3.06 (.14)</td>
</tr>
<tr>
<td>60 to 73</td>
<td>4.24 (.08)</td>
<td>3.33 (.15)</td>
<td>3.21 (.18)</td>
</tr>
</tbody>
</table>

and oldest groups having a decrease from pre- to post-training, while the 40-49 and 50-59 age groups showed a slight increase (see Figure 12). Pre- and post-training differences in terms of career resilience are illustrated in Figure 13 and show decreases in post-training scores for the youngest age and 30-39 groups, while a slight increase was seen in the 40-49 and 50-59 age groups. The oldest age group showed no change from pre- to post-training in terms of career resilience.

A post-hoc paired-sample $t$-test was performed to examine differences within age group in terms of the CCM subscales. The 18 to 29 age group was found to have a statistical significant decrease in career planning scores from pre-training ($M = 4.00, SD = 0.79$) to post-training ($M = 3.69, SD = 0.95$), $t(31) = 2.09, p < .045$ (two-tailed). The mean decrease in career planning was 0.31 ($CI_{95} = 0.01, 0.61$). The eta squared statistic ($\eta^2 = .12$) indicated a moderate effect size. Also, a statistical significant increase in
Figure 11. Pre- and Post-Training Mean Scores on Career Identity Measure by Age Group

career identity scores was found from pre-training \((M = 4.10, SD = 0.60)\) to post-training \((M = 4.24, SD = 0.55)\), \(t(56) = -2.10, p < .041\) (two-tailed) for the 50-59 age group. The mean increase in career identity scores was 0.14 \((CI_{95} = -0.28, -.01)\). The eta squared
Hypothesis 3. The change in overall job satisfaction as a consequence of the training will differ by age group of personal care assistants, with the most improvement shown by the oldest age group (greater than 60), and each younger group (50-59, 40-49, and 30-39) showing decreasingly moderate improvements with the youngest.
Figure 13. Pre- and Post-Training Mean Scores on Career Resilience Measure by Age Group

**age (18-29) showing the least improvement.** After adjusting for pre-training differences in the overall job satisfaction scores, group differences based on age for overall job satisfaction approached statistical significance, $F(4, 215) = 2.32, p = .06, \eta_p^2 = .04$, although they did not meet the alpha criteria of .05. This provides some indication that the training intervention may have had a differing effect by age of the training
participants in terms of their overall job satisfaction after participating in the training intervention.

To examine these findings further, a Least Significant Difference (LSD) post-hoc comparison test was performed to explore group differences in post-training overall job satisfaction after adjusting for any pre-training differences, and revealed statistically significant group differences. Specifically, differences were found between the youngest decade (18-29) and the 40-49 decade \( (p < .01) \) and the 50-59 decade \( (p < .05) \). In addition, statistically significant differences were found between 30-39 and 40-49 age groups \( (p < .03) \).

To account for any pre-training differences in terms of overall job satisfaction, adjusted mean scores were calculated by treating the pre-training score as a covariate (see Table 11).

Table 11. Adjusted Mean Scores on Overall Job Satisfaction by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Overall Job Satisfaction</th>
<th>Adjusted Mean (Standard Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 29</td>
<td>84.93</td>
<td>84.93 (2.25)</td>
</tr>
<tr>
<td>30 to 39</td>
<td>83.83</td>
<td>83.83 (2.04)</td>
</tr>
<tr>
<td>40 to 49</td>
<td>78.12</td>
<td>78.12 (1.58)</td>
</tr>
<tr>
<td>50 to 59</td>
<td>79.22</td>
<td>79.22 (1.75)</td>
</tr>
<tr>
<td>60 to 73</td>
<td>80.52</td>
<td>80.52 (2.25)</td>
</tr>
</tbody>
</table>

The mean scores on overall job satisfaction for both pre-training and post-training by age group are provided in Figure 14. The youngest and 30-39 age groups show
Figure 14. Pre- and Post-Training Mean Scores on Overall Job Satisfaction Measure by Age Group

increases from pre- to post-training overall job satisfaction scores, while all of the remaining older age groups reveal a decrease from pre- to post-training.

A post-hoc paired-samples $t$-test was conducted to evaluate the impact of the training intervention on training participants’ overall job satisfaction scores within age groups. There was a statistically significant decrease from pre-training ($M = 83.8$, $SD = 10.12$) to post-training ($M = 78.6$, $SD = 14.9$), $t(64) = 2.67$, $p < .01$ (two-tailed) within
the 40 to 49 age group. The mean decrease in overall job satisfaction scores was 5.24 
\(CI_{.95} = 1.32, 9.15\). The eta squared statistic \(\eta^2 = .10\) indicated a moderate effect size. 

Chapter five will provide a detailed discussion of these findings.

**Hypothesis 4. The change in each of the MSQ subscales, intrinsic job satisfaction and extrinsic job satisfaction, as a consequence of the training will differ by age group of personal care assistants, with the most improvement shown by the oldest age group (greater than 60), and each younger group (50-59, 40-49, and 30-39) showing decreasingly moderate improvements with the youngest age (18-29) showing the least improvement.** After adjusting for pre-training differences in MSQ measure subscales, the ANCOVA revealed no statistically significant group differences based on age for intrinsic or extrinsic job satisfaction \(p > .05\) as illustrated in Table 12.

<table>
<thead>
<tr>
<th>MSQ Measure</th>
<th>F Statistic</th>
<th>(p)</th>
<th>(\eta_p^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrinsic Job Satisfaction</td>
<td>(F(4, 220) = 1.81)</td>
<td>.13</td>
<td>.03</td>
</tr>
<tr>
<td>Extrinsic Job Satisfaction</td>
<td>(F(4, 222) = 1.95)</td>
<td>.10</td>
<td>.03</td>
</tr>
</tbody>
</table>

The adjusted means and standard error values after controlling for any pre-training differences in scores are shown in Table 13.

The mean scores on intrinsic and extrinsic job satisfaction scores for both pre-training and post-training by age group are provided graphically in Figure 15, which
Table 13. Adjusted Mean Scores on the Job Satisfaction Measures by Age Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Intrinsic Job Satisfaction</th>
<th>Extrinsic Job Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 to 29</td>
<td>53.21 (1.42)</td>
<td>23.35 (.81)</td>
</tr>
<tr>
<td>30 to 39</td>
<td>52.41 (1.27)</td>
<td>22.86 (.73)</td>
</tr>
<tr>
<td>40 to 49</td>
<td>49.32 (0.99)</td>
<td>21.66 (.56)</td>
</tr>
<tr>
<td>50 to 59</td>
<td>50.46 (1.07)</td>
<td>20.91 (.61)</td>
</tr>
<tr>
<td>60 to 73</td>
<td>49.89 (1.42)</td>
<td>22.16 (.79)</td>
</tr>
</tbody>
</table>

shows the same distribution pattern as with the overall job satisfaction scores with differences within age groups, with the youngest and 30-39 groups showing increases, and the three older age groups showing decreases from pre- to post-training in terms of intrinsic job satisfaction.

Pre- and post-training differences in mean extrinsic job satisfaction scores are provided in Figure 16. An increase from pre- to post-training is seen in the youngest age group, while a pre- to post-training decrease in extrinsic job satisfaction scores is apparent among all other age groups.

A post-hoc paired-samples t-test was conducted to evaluate the impact of the training intervention on training participants’ scores on the MSQ subscales within age groups. The 40 to 49 age group showed statistically significant decreases in intrinsic job satisfaction scores from pre-training ($M = 52.2$, $SD = 5.30$) to post-training ($M = 49.6$, $SD = 5.30$).
Figure 15. Pre- and Post-Training Mean Scores on Intrinsic Job Satisfaction Measure by Age Group

= 9.78), \( t(65) = 2.04, p < .05 \) (two-tailed), as well as with extrinsic job satisfaction from pre-training (\( M = 23.0, SD = 4.59 \)) to post-training (\( M = 21.7, SD = 4.88 \)), \( t(65) = 2.09, p < .04 \) (two-tailed). The mean decrease in intrinsic job satisfaction scores was 2.68 (\( CI_{95} = 0.06, 5.29 \)). The eta squared statistic (\( \eta^2 = .06 \)) indicated a moderate effect size. The mean decrease in extrinsic job satisfaction scores was 1.24 (\( CI_{95} = 0.06, 2.41 \)). The eta
Figure 16. Pre- and Post-Training Mean Scores on Extrinsic Job Satisfaction Measure by Age Group

squared statistic ($\eta^2 = .06$) again indicated a moderate effect size. The 50 to 59 age group had a statistically significant difference from pre-training scores of extrinsic job satisfaction ($M = 22.4, SD = 3.94$) to post-training scores ($M = 20.8, SD = 5.09$), $t(56) = 2.21, p < .031$ (two-tailed). The mean decrease in extrinsic job satisfaction scores was 1.64 ($CI_{95} = 0.15, 3.12$). The eta squared statistic ($\eta^2 = .08$) indicated a moderate effect size. Chapter five will provide a detailed discussion of these findings.
To test hypotheses five through seven, a series of one-way ANCOVAs was conducted to compare changes in career commitment and job satisfaction as a consequence of the training among various groups of training participants based on pre-training levels of extrinsic job satisfaction. The independent variable was pre-training level of extrinsic job satisfaction of the training participant divided into three groups of approximately equal size. The dependent variables were post-training scores of the CCM measure, both overall and the subscales, and intrinsic job satisfaction. Training participants’ scores on the pre-training administration of the two study measures were used as a covariate in these analyses.

Initially, a one-way, between groups ANOVA was performed to validate that the extrinsic job satisfaction groups differed significantly in terms of extrinsic job satisfaction. There was a statistically significant difference at the $p < .05$ level in pre-training extrinsic job satisfaction scores for the three groups: $F(2, 266) = 472.24, p < .001$. In addition, post-hoc comparisons using the Tukey HSD test indicated that the mean scores for each group were significantly different from one another (see Table 14).

Table 14. Mean Scores on Extrinsic Job Satisfaction Measure by Extrinsic Job Satisfaction Group

<table>
<thead>
<tr>
<th>Extrinsic Job Satisfaction Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>17.4</td>
<td>3.51</td>
<td>92</td>
</tr>
<tr>
<td>Middle</td>
<td>23.5</td>
<td>1.07</td>
<td>81</td>
</tr>
<tr>
<td>High</td>
<td>27.7</td>
<td>1.45</td>
<td>94</td>
</tr>
</tbody>
</table>
Hypothesis 5. The change in overall career commitment as a consequence of the training will differ by group of personal care assistants based on extrinsic job satisfaction, with the high level group showing the most improvement, the medium level group showing moderate improvement and the low level group showing the least improvement. After adjusting for pre-training differences in the overall career commitment scores, statistically significant group differences were found $F(2, 224) = 3.92, p = .02$, partial eta square was 0.03.

A post-hoc LSD was performed to explore where the differences occurred between groups in terms of their post-training overall career commitment scores after adjusting for pre-training differences. Results revealed that the low group had a significantly lower adjusted post-training score on the overall career commitment scale than both the middle group ($p = .04$) and the high group ($p = .01$). Scores for the middle group were not statistically different from the high group ($p > .05$). The adjusted means scores and standard error values on overall career commitment after controlling for any pre-training differences by extrinsic job satisfaction group are found in Table 15.

Pre and post-training mean score on overall career commitment by extrinsic job satisfaction groups are provided in Figure 17. The graph depicts a decrease in overall career commitment scores from pre- to post-training for the low group and conversely, an increase for the middle group. The high extrinsic job satisfaction group shows no change.
Table 15. Adjusted Mean Scores on Career Commitment Measure by Extrinsic Job Satisfaction Group

<table>
<thead>
<tr>
<th>Extrinsic Job Satisfaction Group</th>
<th>Adjusted Mean (Standard Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>3.49 (.07)</td>
</tr>
<tr>
<td>Middle</td>
<td>3.69 (.07)</td>
</tr>
<tr>
<td>High</td>
<td>3.75 (.07)</td>
</tr>
</tbody>
</table>

Post-hoc paired-samples \(t\)-tests were performed to examine any differences within groups based on the level of extrinsic job satisfaction and no statistically significant within group differences in terms of overall career commitment were found. Chapter five will provide a detailed discussion of these findings.

**Hypothesis 6.** The change in each of the CCM subscales, career identity, career planning, and career resilience, as a consequence of the training will differ by group of personal care assistants based on extrinsic job satisfaction, with the high level group showing the most improvement, the medium level group showing moderate improvement and the low level group showing the least improvement. After adjusting for pre-training difference with the CCM subscales, statistically significant group differences were found in terms of changes in career planning as a consequence of the training (see Table 16). Additionally, the probability associated with group differences in terms of career identity approached statistical significance, although it did not meet the alpha criteria of .05, \(F(2, 225) = 2.79, p = .06\), partial eta squared =
No statistically significant group difference was found in terms of career resilience ($p > .05$).

A post-hoc LSD was performed to explore where the differences occurred between groups in terms of their post-training career planning scores after adjusting for...
Table 16. ANCOVA Results for Career Commitment Measure – Groups Based on Pre-Training Levels of Extrinsic Job Satisfaction

<table>
<thead>
<tr>
<th>CCM Measure</th>
<th>F Statistic</th>
<th>$p$</th>
<th>$\eta^2_p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Identity</td>
<td>$F(2, 225) = 2.79$</td>
<td>.06</td>
<td>.02</td>
</tr>
<tr>
<td>Career Planning</td>
<td>$F(2, 225) = 4.17$</td>
<td>.02*</td>
<td>.04</td>
</tr>
<tr>
<td>Career Resilience</td>
<td>$F(2, 225) = 2.23$</td>
<td>.11</td>
<td>.02</td>
</tr>
</tbody>
</table>

* $p < .05$

any pre-training differences. Results revealed statistically significant differences in terms of the career planning scores between the low group and the middle group ($p = .04$) and the low group and the high group ($p = .01$). There was no statistically significant difference between the middle and high groups ($p > .05$).

The adjusted means scores on the CCM subscales after controlling for any pre-training differences by extrinsic job satisfaction group are found in Table 17.

Table 17. Adjusted Mean Scores on Career Commitment Measure by Extrinsic Job Satisfaction Group

<table>
<thead>
<tr>
<th>Extrinsic Job Satisfaction Group</th>
<th>Adjusted Mean (Standard Error)</th>
<th>Adjusted Mean (Standard Error)</th>
<th>Adjusted Mean (Standard Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>4.17 (.06)</td>
<td>3.36 (.10)</td>
<td>2.84 (.13)</td>
</tr>
<tr>
<td>Middle</td>
<td>4.27 (.06)</td>
<td>3.60 (.10)</td>
<td>3.17 (.13)</td>
</tr>
<tr>
<td>High</td>
<td>4.36 (.06)</td>
<td>3.63 (.10)</td>
<td>3.18 (.13)</td>
</tr>
</tbody>
</table>
Pre- and post-training mean scores on the CCM subscales by extrinsic job satisfaction are presented graphically in Figure 18 and suggest an increase in career identity from pre- to post-training for both the middle and high groups based on extrinsic job satisfaction. The low group shows no change from pre- to post-training.

Figure 18. Pre- and Post-Training Mean Scores on the Career Identity Measure by Extrinsic Job Satisfaction Group

Career planning mean score differences are depicted in Figure 19. An increase from pre- to post-training is revealed in the middle group, while the low group shows a
Figure 19. Pre- and Post-Training Mean Scores on the Career Planning Measure by Extrinsic Job Satisfaction Group
decrease in their career planning scores from pre- to post-training. The high group shows no change. The within group changes in career resilience mean scores from pre- to post-training mimic that of the career planning scores; an increase in the middle group, a decrease in the low group and no change in the high group from pre- to post-training (see Figure 20).
Figure 20. Pre- and Post-Training Mean Scores on the Career Resilience Measure by Extrinsic Job Satisfaction Group

Post-hoc paired-samples $t$-tests were also performed to examine any differences within groups based on the level of extrinsic job satisfaction, and no statistically significant within group differences in terms of the three CCM measure subscales were found. Chapter five will provide a detailed discussion of these findings.
Hypothesis 7. The change in the MSQ subscale, intrinsic job satisfaction, as a consequence of the training will differ by group of personal care assistants based on extrinsic job satisfaction, with the high level group showing the most improvement, the medium level group showing moderate improvement and the low level group showing the least improvement. After adjusting for pre-training differences in intrinsic job satisfaction, the results revealed no statistically significant differences between groups in terms of intrinsic job satisfaction as a consequence of the training $F(2, 221) = 1.64$ $p < .20$, partial eta squared = 0.02. The adjusted mean scores on intrinsic job satisfaction by extrinsic job satisfaction are found in Table 18.

Table 18. Adjusted Mean Scores on Intrinsic Job Satisfaction by Extrinsic Job Satisfaction Group

<table>
<thead>
<tr>
<th>Extrinsic Job Satisfaction Group</th>
<th>Intrinsic Job Satisfaction</th>
<th>Adjusted Mean (Standard Error)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td>50.37 (1.04)</td>
</tr>
<tr>
<td>Middle</td>
<td></td>
<td>49.66 (0.93)</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td>52.14 (1.04)</td>
</tr>
</tbody>
</table>

In examining the changes in the intrinsic job satisfaction scores, the mean scores for intrinsic job satisfaction for both pre-training and post-training between groups based on pre-training levels of extrinsic job satisfaction are illustrated in Figure 21. The graph
Figure 21. Pre- and Post-Training Mean Scores on Intrinsic Job Satisfaction by Extrinsic Job Satisfaction Group

depicts an increase from pre- to post-training mean intrinsic job satisfaction scores in the low group. Conversely, the middle and high group show a pre- to post-training decrease. A post-hoc paired-samples $t$-test was performed to evaluate any differences within groups based on extrinsic job satisfaction in terms of post-training intrinsic job satisfaction scores. A statistically significant increase in the intrinsic job satisfaction score from pre-training ($M = 45.7, SD = 8.63$) to post-training ($M = 49.4, SD = 5.89$), $t(75) = -3.48, p <$
.001 (two-tailed) within the low group was discovered. The mean increase in intrinsic job satisfaction scores was 3.68 (CI$_{95}$ = -0.57, -5.87). The eta squared statistic ($\eta^2 = .14$) indicated a large effect size. Statistically significant differences within the middle group were also revealed, showing a decrease in the intrinsic job satisfaction score from pre-training ($M = 51.9$, $SD = 5.01$) to post-training ($M = 49.8$, $SD = 8.62$), $t(75) = 2.02$, $p < .047$ (two-tailed). The mean decrease in intrinsic job satisfaction scores was 2.11 (CI$_{95}$ = 0.034, 4.19). The eta squared statistic ($\eta^2 = .05$) indicated a small effect size. The high level extrinsic job satisfaction group also showed a within group statistically significant difference in terms of intrinsic job satisfaction from pre-training ($M = 56.1$, $SD = 3.54$) to post-training ($M = 53.0$, $SD = 9.44$), $t(72) = 2.59$, $p < .012$ (two-tailed). The mean decrease in intrinsic job satisfaction was 3.07 (CI$_{95}$ = 0.71, 5.43). The eta squared statistic ($\eta^2 = .09$) indicated a moderate effect size. Chapter five will provide a detailed discussion of these findings.

For the final two hypotheses, a 2 x 3 between subjects factorial ANCOVA was conducted to evaluate the effects of extrinsic job satisfaction (high and low) and age (young, middle, oldest) to influence changes in overall career commitment and each of the CCM subscales; career identify, career planning, and career resilience, as a consequence of the training. The independent variables were the age of the training participant divided into three groups (youngest, middle and oldest) of approximately equal size and the pre-training level of extrinsic job satisfaction of the training participant into two groups (high and low) of approximately equal size. The dependent variables were post-training scores on the CCM measure, both overall and the subscales, and
intrinsic job satisfaction. Training participants’ scores on the pre-training administration of the two study measurements were used as covariates in these analyses.

**Hypothesis 8.** Age and level of extrinsic job satisfaction of personal care assistants will interact to influence changes in overall career commitment, as a consequence of the training. After adjusting for pre-training differences with the overall commitment scores, the factorial ANCOVA indicated significant main effects of extrinsic job satisfaction and overall career commitment (see Table 19). Because the main effect for extrinsic job satisfaction contained only two levels, no follow-up pairwise tests were conducted. The interaction effect between age and extrinsic job satisfaction was not significant.

Table 19. Factorial ANCOVA Results for Overall Career Commitment for Age and Extrinsic Job Satisfaction (EJS)

<table>
<thead>
<tr>
<th>CCM Measure</th>
<th>Source</th>
<th>F Statistic</th>
<th>p</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Career Commitment</td>
<td>Age</td>
<td>$F(2, 220) = 0.63$</td>
<td>.54</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>EJS</td>
<td>$F(1, 220) = 8.13$</td>
<td>.005*</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>Age x EJS</td>
<td>$F(2, 220) = 1.03$</td>
<td>.36</td>
<td>.01</td>
</tr>
</tbody>
</table>

* $p < .05$

The adjusted mean scores after adjusting for pre-training score differences are in Table 20. The means and standard deviations for overall career commitment as a function of the age and extrinsic job satisfaction are presented in Table 21.

**Hypothesis 9.** Age and level of extrinsic job satisfaction of personal care assistants will interact to influence changes in each of the Career Commitment
Table 20. Adjusted Mean Scores on Career Commitment Measure by Age and Extrinsic Job Satisfaction Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Extrinsic Job Satisfaction Group</th>
<th>Overall Career Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youngest</td>
<td>Low</td>
<td>3.46 (.11)</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.70 (.09)</td>
</tr>
<tr>
<td>Middle</td>
<td>Low</td>
<td>3.64 (.09)</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.72 (.11)</td>
</tr>
<tr>
<td>Oldest</td>
<td>Low</td>
<td>3.49 (.09)</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.86 (.10)</td>
</tr>
</tbody>
</table>

Table 21. Mean Scores on Career Commitment Measure by Age and Extrinsic Job Satisfaction Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Extrinsic Job Satisfaction Group</th>
<th>Overall Career Commitment</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youngest</td>
<td>Low</td>
<td>3.50 (.56)</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.82 (.67)</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.68 (.64)</td>
<td>71</td>
</tr>
<tr>
<td>Middle</td>
<td>Low</td>
<td>3.56 (.57)</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.77 (.81)</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.65 (.68)</td>
<td>77</td>
</tr>
<tr>
<td>Oldest</td>
<td>Low</td>
<td>3.38 (.65)</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>3.87 (.71)</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>3.59 (.71)</td>
<td>80</td>
</tr>
</tbody>
</table>

Measure subscales, career identity, career planning, and career resilience, as a consequence of the training. After adjusting for pre-training differences in the CCM scores, the factorial ANCOVA indicated significant main effects of extrinsic job satisfaction and career identity, career planning, and career resilience (see Table 22).
Table 22. Factorial ANCOVA Results for Career Commitment Measure for Age and Extrinsic Job Satisfaction (EJS)

<table>
<thead>
<tr>
<th>CCM Measure</th>
<th>Source</th>
<th>F Statistic</th>
<th>p</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career Identity</td>
<td>Age</td>
<td>$F(2,221) = 0.23$</td>
<td>.80</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>EJS</td>
<td>$F(1.221) = 7.37$</td>
<td>.01*</td>
<td>.03</td>
</tr>
<tr>
<td></td>
<td>Age x EJS</td>
<td>$F(2, 221) = 1.05$</td>
<td>.35</td>
<td>.01</td>
</tr>
<tr>
<td>Career Planning</td>
<td>Age</td>
<td>$F(2,221) = .641$</td>
<td>.53</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>EJS</td>
<td>$F(1,221) = 5.37$</td>
<td>.02*</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Age x EJS</td>
<td>$F(2, 221) = .983$</td>
<td>.38</td>
<td>.01</td>
</tr>
<tr>
<td>Career Resilience</td>
<td>Age</td>
<td>$F(2,221) = .727$</td>
<td>.49</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>EJS</td>
<td>$F(1,221) = 4.41$</td>
<td>.04*</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>Age x EJS</td>
<td>$F(2, 221) = 1.11$</td>
<td>.33</td>
<td>.01</td>
</tr>
</tbody>
</table>

* $p < .05$

Because the main effect for extrinsic job satisfaction contained only two levels, no post-hoc pairwise tests were conducted. The interaction effect between age and extrinsic job satisfaction was not significant.

In preparation for the factorial ANCOVA, the adjusted means were calculated and are presented in Table 23. The means and standard deviations for the CCM subscales as a function of the age and extrinsic job satisfaction are presented in Table 24.

Summary of Findings

The demographic characteristics of the PCAs who participated in the ECAT training initiative were very comparable to those described by Montgomery and
Table 23. Adjusted Mean Scores on CCM Subscales by Age and Extrinsic Job Satisfaction Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Extrinsic Job Satisfaction Group</th>
<th>Adjusted Mean (Standard Error)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Career Identity</td>
<td>Career Planning</td>
<td>Career Resilience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Youngest</td>
<td>Low</td>
<td>4.23 (.09)</td>
<td>3.46 (.16)</td>
<td>2.70 (.19)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4.28 (.08)</td>
<td>3.71 (.14)</td>
<td>3.19 (.17)</td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>Low</td>
<td>4.17 (.07)</td>
<td>3.57 (.13)</td>
<td>3.09 (.16)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4.39 (.08)</td>
<td>3.66 (.15)</td>
<td>3.09 (.19)</td>
<td></td>
</tr>
<tr>
<td>Oldest</td>
<td>Low</td>
<td>4.18 (.07)</td>
<td>3.23 (.13)</td>
<td>2.95 (.16)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4.43 (.08)</td>
<td>3.70 (.15)</td>
<td>3.35 (.18)</td>
<td></td>
</tr>
</tbody>
</table>

Table 24. Mean Scores on Career Commitment Measure Subscales by Age and Extrinsic Job Satisfaction Group

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Extrinsic Job Satisfaction Group</th>
<th>Mean (Standard Deviation)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Career Identity</td>
<td>Career Planning</td>
<td>Career Resilience</td>
<td>n</td>
<td></td>
</tr>
<tr>
<td>Youngest</td>
<td>Low</td>
<td>4.19 (.54)</td>
<td>3.49 (.85)</td>
<td>2.78 (.98)</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4.41 (.52)</td>
<td>3.86 (.89)</td>
<td>3.18 (1.09)</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4.32 (.54)</td>
<td>3.70 (.89)</td>
<td>3.01 (1.05)</td>
<td>71</td>
</tr>
<tr>
<td>Middle</td>
<td>Low</td>
<td>4.14 (.61)</td>
<td>3.56 (.82)</td>
<td>2.96 (.93)</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4.45 (.45)</td>
<td>3.65 (1.01)</td>
<td>3.19 (1.37)</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4.27 (.57)</td>
<td>3.60 (.90)</td>
<td>3.05 (1.13)</td>
<td>77</td>
</tr>
<tr>
<td>Oldest</td>
<td>Low</td>
<td>4.06 (.69)</td>
<td>3.12 (.85)</td>
<td>2.91 (1.10)</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>4.43 (.45)</td>
<td>3.66 (.99)</td>
<td>3.41 (1.30)</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>4.22 (.62)</td>
<td>3.35 (.95)</td>
<td>3.13 (1.21)</td>
<td>80</td>
</tr>
</tbody>
</table>

colleagues (2005) for age and gender; however, the study sample had a very different race distribution, with Caucasians and African Americans making up the vast majority of trainees, and only two percent identified as Hispanic or Latino.
The results of the analyses on the impact of the ECAT training initiative and whether there are differential effects of age and level of extrinsic job satisfaction on changes in career commitment and job satisfaction are varied. Age did not have a differential effect on changes in overall career commitment or the CCM subscales as a consequence of the training, and therefore, hypotheses one and two are rejected. Though no significant age group differences were revealed in terms of overall career commitment or the CCM subscales, a post-hoc paired-sample $t$-test was performed and revealed that the 18 to 29 age group had a statistically significant decrease in overall career commitment and career planning scores from pre-training to post-training. A statistically significant increase in career identity scores was found from pre-training to post-training for the 50-59 age group.

In examining changes in overall job satisfaction (hypothesis three), differences between the age groups approached statistical significance ($p < .06$), though they did not meet the alpha level criterion of .05. There was a 6.0% probability that the differential changes among the age groups in terms of overall job satisfaction scores as a consequence of the training were due to chance alone. Since age group differences in terms of overall job satisfaction approached statistical significance, a LSD post-hoc comparison test was performed and revealed statistically significant group differences between the youngest decade (18-29) and the 40-49 decade, as well as between the youngest decade and the 50-59 decade. Additionally, statistically significant differences were found between the 30-39 and 40-39 age groups. Though hypothesis three must be rejected since the alpha criteria was not satisfied, the results of the ANCOVA and post-
hoc LSD do suggest that age had some differential effect in terms of changes in overall job satisfaction.

Likewise, hypothesis four was rejected due to a lack of statistically significant differences in terms of changes in either intrinsic or extrinsic job satisfaction scores between age groups as a result of participating in the training. Although a collective difference among the age groups in terms of changes in the CCM and MSQ scores as a consequence of the training did not reach statistical significance, differences were found within some of the age groups. A series of post-hoc paired-samples $t$-tests revealed the impact of the training intervention on MSQ scores within age groups. There was a statistically significant decrease in the overall job satisfaction score from pre-training to post-training for the 40 to 49 age group, as well as decreases in both intrinsic and extrinsic job satisfaction scores. Examination of the 50 to 59 age group showed a statistically significant decrease in the extrinsic job satisfaction scores from pre-training to post-training.

Hypothesis five was confirmed with statistically significant differences revealed between groups based on extrinsic job satisfaction levels in terms of changes in overall career commitment ($p = .02$). Specifically, statistically significant differences were revealed between the lowest group and the highest group, while the middle group showed no significant difference from the other two groups as a consequence of the training. In terms of the CCM subscales, hypothesis six was only confirmed in terms of career planning ($p = .02$), while differences in extrinsic job satisfaction groups in terms of career identity and career resilience showed no statistical significance. Specifically, statistically
significant differences in career planning as a consequence of the training were revealed between the lowest group and the highest group, while the middle group showed no significant difference from the other two groups. No statistically significant extrinsic job satisfaction group differences were revealed in terms of changes in intrinsic job satisfaction as a consequence of the training, and thereby, hypothesis seven was rejected. Post-hoc paired-sample $t$-tests were performed and revealed a statistically significant increase in the intrinsic job satisfaction score from pre-training to post-training within the lowest group, while the middle and highest groups both revealed a within group statistically significant decrease in the intrinsic job satisfaction score from pre-training to post-training.

Lastly, in examining the interaction of age and extrinsic job satisfaction to influence changes in career commitment as a consequence of the training, statistically significant main effects were found with respect to levels of extrinsic job satisfaction for overall career commitment, career identity, career planning, and career resilience. However, no main effects for age and no interaction effects were obtained, and thereby, both hypothesis eight and nine were rejected. Chapter five will provide a detailed discussion of these findings.
CHAPTER 5: DISCUSSION

Introduction

Reducing turnover of the paraprofessional healthcare workforce across all care settings is of paramount importance. Job satisfaction is a key factor in turnover for healthcare paraprofessionals (IOM, 2001; Capitman, Leutz, Bishop, & Casler, 2004; Castle, Degenholtz, & Rosen, 2006), as well as, it being an contributing characteristic of the quality of care provided, as it has been inversely related to high levels of staff turnover (Ellenbecker 2004; Karsh, Booske & Sainfort, 2005; Sikorska-Simmons 2005; van den Berg, Landeweerd, Tummers, & van Merode, 2006). Work strain, burnout and stress have all been linked to negative job satisfaction outcomes (Cohen-Mansfield, 1995).

Given the degree to which job satisfaction can negatively impact healthcare delivery, gaining a better understanding of the factors affecting job satisfaction is critical in order to develop and implement workplace interventions to enhance job satisfaction and reduce turnover (Menne, Ejaz, Noelker, & Jones, 2007; Ejaz, Noelker, Menne, & Bagaka, 2008). One such intervention is training. Data suggest that specialized training can improve the retention of paraprofessional staff (Grant, Kane, Potthoff, & Ryden,
1996; Konrad & Morgan, 2006), as well as help direct care staff to better deal with job-related stress (Schonfeld, Cairl et al., 1999), increases job satisfaction (Braun, Suzuki, Cusick, & Howard-Carhart, 1997), decrease absenteeism (Maas, Buckwalter, Swanson, & Mobily, 1994), and reduce burn out (Austrom, 2000).

As part of the Direct Service Workforce Demonstration made possible through a Real Choice Systems Change grant from the Center for Medicare and Medicaid Services, the “Enhanced Care Assistant Training” was a specifically designed training intervention for personal care assistants providing Medicaid home- and community-based personal care services to positively change career commitment and job satisfaction. The initiative had an over-arching goal of improving retention, and in turn, become an intervention to address the current paraprofessional healthcare workforce crisis. The intervention was very successful in attracting over 300 PCAs to participate in the 40-hour training intervention.

Bandura’s theory of self-efficacy (1997) served as the theoretical framework for both the training curriculum development and this research study’s theoretical model. The curriculum development was centered on the idea of strengthening one’s sense of vocational ability, specifically, illustrating how to reduce the deleterious effects of job-related stressors of performing the role of the PCA, and thereby, improving a sense of self-efficacy. The theory of self-efficacy is built on the notion that unless people believe they can produce desired effects by their actions, they have little incentive to act. This places a significant emphasis on the power of efficacy beliefs as a major basis for action. Empowering an individual with information to identify and reduce the deleterious effects
of stressors is key in developing the skills which build a stronger sense of self-efficacy, and hence, vocational ability. It is this stronger sense of vocational ability that drives a positive change in career commitment and job satisfaction.

This study hypothesizes that the training intervention produces a series of intrapersonal changes which ultimately will lead to a change in career commitment and job satisfaction. In addition, the theoretical model proposes a triumvirate relationship between training interventions, a training participant’s age and pre-training extrinsic job satisfaction to produce a change in overall job satisfaction and career commitment, where an interaction exists between age and pre-training levels of extrinsic job satisfaction. The model proposes this interaction generates a mediating effect on the influence of a training invention to produce a change in career commitment.

Chapter 4 summarized the group differences based on age and extrinsic job satisfaction of PCAs and how the training intervention affected career commitment and job satisfaction, as well as, the interaction of age and extrinsic job satisfaction and its affect on changes to career commitment as a consequence of the training. This chapter identifies the key findings of the research, limitations of the data, offers recommendations, and implications for future research.

Summary of Key Findings

Age did not moderate the effectiveness of the intervention with respect to post-training levels of career commitment or job satisfaction. Accordingly, the study hypotheses one through four proposed that training would have a differing effect on changes in overall career commitment and job satisfaction, as well as career identity,
career planning, career resilience, intrinsic job satisfaction, and extrinsic job satisfaction among participants in different age groups are rejected. This finding contradicts the proposed theoretical model which stated that age influences vocational beliefs and self-efficacy, which would result in intrapersonal changes leading to changes in career commitment and job satisfaction. Although, a collective difference among the age groups in terms of the two study measures did not reach statistical significance, some statistically significant differences within age groups were revealed through post-hoc examination which suggests the training did have some differing effects among participants of different ages.

Most notable is the 40-49 age group, which showed a significant decrease in overall, extrinsic and intrinsic job satisfaction scores from pre- to post-training. Special attention must be paid to this age group, as the median age of the home care PCA workforce is 46, and additionally, the 35 to 54 age group makes up the largest proportion of PCAs (Montgomery, Holley, Deichert & Kosloski, 2005). This within age group difference suggests that age may moderate the effectiveness of the training intervention to change job satisfaction. This finding also indicates the instability of this particular age group in improving, or at a minimum maintaining, their levels of job satisfaction after participation in training interventions. A recent study related to training interventions and job satisfaction investigated the linkages between perceived availability of training and empowerment, among other job attitude attributes. The study found a strong linkage between perceived availability of training and empowerment, job satisfaction and organizational commitment (Yeatts, Cready, Swan & Shen, 2010).
Despite the decrease in job satisfaction from pre- to post-training reported for this age group in this study, training is positively related to job satisfaction and should remain a priority when designing and implementing interventions for this workforce to increase career commitment and job satisfaction. In this study particularly, the training intervention was shown to have a statistically significant positive change in intrinsic job satisfaction for individuals within the lowest levels of pre-training extrinsic job satisfaction scores. Other research also illustrates the important of training and its linkage with job satisfaction. The research of Sengupta, Harris-Kojetin and Ejaz (2010) which focused on certified nursing assistants in nursing homes, found that CNAs who perceived that their initial training prepared them well for their jobs were more likely than other CNAs to be extremely satisfied with their jobs. The same relationship was true between CNAs’ assessed usefulness of their continuing education and job satisfaction.

One potential reason for the lack of positive changes in career commitment and job satisfaction found before and after this training among participants within the various age groups is the inability of the participants to transfer the newly acquired knowledge to practice. In the previous work of Rachel et al. (2004), the use of a progressive action plan model was employed as part of training intervention to provide a structure and mechanism for training participants to apply the training curriculum content to their workplace behaviors. Progressive action planning provides training participants with a means to integrate the curriculum by encouraging them to set content-based goals, a means to achieve the goals, a timeline in which to complete them, and sharing their experience in meeting this goals with co-workers and supervisors. Qualitative analyses of
the action plans found that respondents reported an increase in their role in care planning meetings and offers to conduct agency in-services. Additionally, respondents reported continuous use and review of the action plan. Despite these positive results, respondents also reported challenges such as the lack of interaction with other co-workers and the lack of supervisor-sponsored opportunities to apply the knowledge. Other research supports the structure of increasing the interaction between co-workers. Specifically, research has shown that engaging in peer mentoring increases the retention rate of those who were mentored (Hegeman & Munro, 2004).

The struggle to apply the content of the ECAT training intervention may have been compounded due to the focus of the content. The ECAT training content focused on the areas of responsibility, recognition, and stress-coping mechanisms. All of these topics relate to factors making up intrinsic job satisfaction, but are also heavily dependent on organizational factors such as supervision, low pay and dealing with difficult families, to successfully apply the training content. These organizational factors most likely go unchanged, and this therefore, poses insurmountable barriers for the PCA. These unsuccessful attempts in workplace application can lead to increased frustration and generate a decrease in job satisfaction. Research suggests that there is typically a struggle in transferring knowledge into practice. Broad (1997) suggested that only 10% to 30% of training activity is actually transferred into practice. Additionally, Aylward, Stolee, Keat and Johncox (2003) in their review of 48 training evaluation studies concluded that there is minimal evidence that knowledge gained from training programs is sustained over time and that organizational and system factors may be accounting for some of the difficulty in
transferring knowledge to practice. Most recently, research has shown interventions aimed at improving job satisfaction, retention and performance of paraprofessional healthcare workers must include improving relevant management practices and policies which improve the communication and recognition of certified nursing assistants (Kostiwa & Meeks, 2009). Likewise, research has shown that CNAs who felt they had a voice in selecting topics covered in continuing education were more likely to find that training valuable, and therefore, merits further consideration of having CNAs involved in the development of training interventions and continuing education content (Sengupta, Harris-Kojetin, & Ejaz, 2010). Therefore, particular attention in the design of training interventions must be made to increase a sense of intrinsic job satisfaction, as well as, making needed changes to organizational structures such as supervisory styles, workplace conditions, and pay which ultimately cause a decrease in extrinsic job satisfaction due to the frustrations felt by the PCA in their unsuccessful workplace application of knowledge caused by the stagnation or unwillingness of home care agencies to change their structural processes to increase the recognition and responsibility of their PCA workforce.

With regard to the career commitment, the youngest participants were the only ones to have any significant decreases from pre- to post-training. Again, the training resulted in a significant decrease in both overall career commitment and career planning from pre- to post-training. This decrease may be due more to the young PCA’s vocational development and brief length of time in the career rather than as a consequence of the training. Their sense of career commitment may not be fully
developed, and therefore, more susceptible to negative change due to their adult
developmental stage. Moreover, although not associated with a statistically significant
result, this age group reported the highest level of all other age groups in terms of pre-
training overall career commitment, career identity and career planning which may have
been a result of their early adulthood life cycle stage where one is over excited at the
prospect of their new career (Kets de Vries, Miller & Toulouse, 1984; McNeese-Smith &
van Servellen, 2000). Another potential cause for the decrease is response bias, which is
known as the tendency of some respondents to distort their responses. This most
prevalent problem is a person’s tendency to present a favorable image of himself or
herself (Polit & Hungler, 1999). This risk must be taken into consideration especially
when dealing with topics such as job satisfaction or one’s commitment to their career.
For this intervention, the response bias may have played a more substantial role at the
time of pre-training administration and then, less so at the time of post-training
administration, hence, resulting in a significant decrease from pre- to post-training
administration.

Lastly, the only within age group increase from pre- to post-training scores
discovered was the 50-59 age group in terms of career identity. This distinction was not
evident in the ANCOVA; however, the positive result is additionally muted when
coupled with the finding of a significant decrease in terms of extrinsic job satisfaction
scores from pre- to post-training for this age group. Herzberg’s Motivation-Hygiene
Theoretical Model (1966) would dictate that extrinsic job satisfaction is only a source of
dissatisfaction or lack of dissatisfaction, and therefore, career identity would contribute
more substantially to increasing retention than extrinsic job satisfaction. This would indicate that a positive change in career identity would lead to greater retention within the paraprofessional healthcare workforce.

In summary, age did not tend moderate changes to career commitment or job satisfaction as a consequence of the training initiative. Despite these findings, some valuable information was gleaned from the results. Specifically, middle aged PCAs are particularly vulnerable to decreases in their sense of job satisfaction as a result of the life cycle stage known as the mid-career crisis described in the work of Kets de Vries, Miller and Toulouse (1984). Their work hypothesized a trimodal curve to describe the relationship between age and job satisfaction where it is high on entering the career, falls as a result of “reality shock”, then rises again during a period of socialization and growth. This rise is followed by another drop in job satisfaction during a time of mid-career crisis then rises a final time just before retirement.

Hypothesis five dealing with group differences based on levels of extrinsic job satisfaction in terms of changes in overall career commitment as a result of the training was confirmed. This result provides evidence that pre-training levels of extrinsic job satisfaction differentially moderate the training intervention’s effectiveness to change career commitment. Specifically, the results revealed that the participants with low levels of extrinsic satisfaction had significantly lower post-training overall career commitment scores than those with high levels of extrinsic satisfaction. Likewise, hypothesis six was partially confirmed with significant group differences found in terms of changes in career planning as a consequence of the training. Again, the results revealed that the
participants with low levels of extrinsic job satisfaction had significantly lower post-training score on their career planning scores than those with high levels of extrinsic job satisfaction. Participants with a median range of extrinsic job satisfaction levels were not statistically different from those with either low or high levels of extrinsic job satisfaction in terms of either overall career commitment or career planning. Additionally, results showed that changes in post-training career identity may also have been associated with pre-training levels of extrinsic job satisfaction, though it did not reach the threshold of statistical significance.

Further descriptive exploration of these results of group differences based on extrinsic job satisfaction in terms of changes to career commitment found that the low level group scored the lowest on both pre- and post-training scores, while the high level group scored the highest in terms of all four career commitment measures. Likewise, the middle group scored between the low and high on both pre- and post-training scores for all of the CCM measures. This pattern of pre- and post training scores for groups based on extrinsic job satisfaction suggests a direct relationship between extrinsic job satisfaction and career commitment and compliments the significant main effect for extrinsic job satisfaction in terms of overall career commitment, as well as the other CCM subscales, found. This finding supports the proposed theoretical model that extrinsic job satisfaction does influence career commitment and offers the opportunity for further research in the area of relationship between extrinsic job satisfaction and career commitment.
Interestingly, extrinsic job satisfaction did not have a differing effect on the training in terms of changes in intrinsic job satisfaction, and therefore, hypothesis seven was rejected; however, each of the three groups did have significant within group changes from pre- to post-training. The low level group was the only group to show an increase in intrinsic job satisfaction from pre- to post-training, while the other groups had decreases in their intrinsic job satisfaction levels. This finding illustrates that those PCAs with the lowest levels of extrinsic job satisfaction benefit the most from training interventions geared at increasing career commitment and job satisfaction in terms of feeling more satisfied with their sense of achievement, potential for advancement, recognition and responsibility. This finding in particular has significant implications for the design and development of future training interventions, as this supports a more targeted approach to offering an intervention to those PCAs with the lowest levels of job satisfaction.

The remaining two study hypotheses proposed that an interaction between age and extrinsic job satisfaction could influence changes in overall career commitment, career identity, career planning, and career resilience. The study revealed that levels of extrinsic job satisfaction did influence changes in overall career commitment, career identity, career planning, and career resilience; however, age did not, and no interactions between extrinsic job satisfaction and age were obtained. Caution must be taken when considering these particular findings due to how the groups were split for this analysis, as these results contradict results found when three levels of extrinsic job satisfaction were compared with respect to changes in career identity and career resilience. When groups
were formed in this way, no group differences in terms of changes in career identity and career resilience were revealed; however, when groups were divided by a median split, group differences were significant in terms of changes in all of the CCM measures. The contradiction in these findings may be attributed to some extent to the sample size difference when dividing the groups by two or three. The effect size may have changed as a result of the strengthening differences between groups when enlarging the group size (Tabachnick & Fidell, 2001).

Limitations of the Data

Despite the contributions this research offers in the specific area of PCA’s career commitment, job satisfaction and the evaluation of training intervention and the influence of age and extrinsic job satisfaction, there are a number of limitations pertinent to the generalizability of the study results.

The most apparent shortcoming for this research is the study’s sample with respect to both the number of cases and the convenience aspect of the sample employed. The sample size was too small for the division of age groups by decade. Age as a statistically significant differing influence on career commitment and job satisfaction found in the earlier work of Coogle, Parham, Jablonski, & Rachel (2007), is lost when defining the age group by decade. This also is the case when dividing the sample into three levels of pre-training extrinsic job satisfaction. As results showed, statistical significance was revealed when dividing the sample into two extrinsic job satisfaction groups for all CCM measures, but significance is lost when dividing the sample into three groups for career identity and resilience. A larger sample size would provide greater
power to reveal true group differences in both the more closely defined age and extrinsic job satisfaction groups.

The second limitation is that this is a sample of convenience and although it was comparable to the demographics of the general population of PCAs, with the exception of the underrepresentation of Latinos and Hispanics, it is impossible to determine if there are differences between the training participant’s pre-training levels of career commitment and job satisfaction and motivation to improve their vocational outlook to those of the general population of PCAs. Further, those PCAs that are willing to both make time and dedicate themselves to a training intervention may be more susceptible or willing to make changes in their stress-coping mechanisms, which would lead to substantial differences from those PCAs less willing to change. This potential confound could have contributed to significant differences in the results of the training evaluation as this intervention was made available to any PCA.

Another limitation is the non-experimental study design and lack of a control group pose threats to the internal validity of the study. Many research studies involving human subjects, including most research which evaluates training interventions and explores changes in levels of paraprofessional healthcare workforce career commitment or job satisfaction are non-experimental in design (Polit & Hungler, 1999). Threats to internal validity can be avoided by using a true experimental design in which subjects are assigned at random to experimental and control conditions. This design would prove to be especially beneficial when evaluating training interventions and its impact to change career commitment and job satisfaction.
The lack of any follow-up data to evaluate subsequent changes in career commitment or job satisfaction, as well as, testing the application of the training intervention content to workplace behavior are also study limitations. This position is supported by the review of the training intervention literature by Aylward, Stolee, Keat and Johncox (2003), which reported there was minimal evidence that knowledge gained from training programs is sustained over time due in part to the lack of follow-up evaluations that could document positive effects. This also prevents the ability for outcome analysis, which would contribute greatly to the body of research in this area and have the beneficial implications to practice and ultimately the quality of care received by recipients of home care.

The self-reporting of career commitment and job satisfaction also limits the reliability of the study data. Response bias must be taken into consideration when evaluating the study results, as the potential for skewed data is considerable due to social desirability in over-stating one’s commitment to their career and satisfaction with their job. This bias can lead to false associations or a failure to detect true relationships (Polit & Hungler, 1999). Similarly, the instruments used in this study to measure career commitment and job satisfaction required the distinction between a “low” of one to a “high” of five, and therefore, provides the opportunity to misunderstand or misinterpret the scale differences due to a lack of clarity in the scale. In other words, the same level of commitment or satisfaction in one participant could be represented differently by another.
Lastly, other threats to internal validity of the study include both the history and actions of the participant between pre- and post-training evaluations and the bias presented by the repeated measures of the study instruments. With this study intervention particularly, it was administered over an eight-week period creating many opportunities for outside activities to occur in the training participant’s life both personally and professionally which would affect their responses on the post-training survey outside the influence of the training intervention itself. Similarly, training participants are given the same survey both pre-training and post-training and may have a tendency to respond to the post-training as they did in the pre-training administration without the appropriate reflection on the training intervention content and its application to their workplace behavior and the resulting changes to their stress levels (Polit and Hungler, 1999).

Recommendations

The study findings lend themselves to several recommendations for specialized training and its evaluation. First, specialized training is effective in both attracting PCA to participate, and to continue, in the training intervention to completion due to its high level of relevancy to the PCA. Future training intervention development for home care PCAs should focus on the specific and unique nature of providing paraprofessional healthcare in a home setting. Moreover, particular attention should be paid to the psychological challenges, as well as the interpersonal relationships and conflicts that exist when providing healthcare in an intimate home setting.
Secondly, training intervention development must also include the utilization of a robust, and most preferably, an experimental design for evaluation. Many shortcomings have been identified in the training evaluation literature concerning the failure to truly test the effectiveness of training. The ability to have randomized control groups is ideal, especially when attempting to evaluate changes in constructs such as career commitment and job satisfaction, as these are, in particular, extremely susceptible to change which may have little or nothing to do with participation in a training intervention.

Lastly, regardless of the type of study design, the evaluation protocol for training interventions needs to include a follow-up component. Again, research clearly illustrates the lack of data on workplace application of knowledge gained as a result of training. If vocational training content does not become manifest in workplace behaviors, then scarce resources will continue to be wasted in both offering the training and the time taken to participate in the training. Furthermore, follow-up evaluations can provide a substantial amount of data related, not only to changes to workplace behaviors, but also to tracking the career movements of participants to better gauge individual turnover and exiting the profession.

Implications for Further Research

These study findings have important implications for further research and the development of specialized training curricula and evaluation. Despite the limited generalizability of these results to paraprofessional healthcare workforce, the findings provide critical information about this largely overlooked group. Effective training interventions have a beneficial practical application by driving positive changes in career
commitment and job satisfaction and thereby, increasing the number of PCAs recruited and retained.

Significant findings of group differences based on the influence of pre-training levels of extrinsic job satisfaction on changes in career commitment suggest further research into how existing levels job satisfaction of a training participant can predict the effectiveness of a training intervention prior to its administration. Likewise, information on training participants’ job satisfaction can influence both how the content of the training intervention is developed and presented. For example, if potential training participants show very low levels of extrinsic job satisfaction, training content can be adjusted to include communication with management, additional peer mentoring, or even suggestions for changes that could be made to the organizational structure as part of the training intervention. Structural changes to the organization can be aimed at increasing the recognition of paraprofessional staff, as well as greater opportunities for communication between management and front-line staff. Additionally, pre-evaluation of potential training participants to measure their current level of job satisfaction can result in a more targeted approach to the selection of whom the training intervention is offered. The development of selection criteria for participation can lead to the training being more effective in positively changing career commitment and job satisfaction. Lastly, changes to the organizational structure which effects the training participants’ extrinsic job satisfaction, such as supervisory style and workplace conditions, should be made in tandem with the training as part of the overall training intervention. This would
allow for better workplace application of the content and reduced frustration among participants when attempting to apply the knowledge gained.

Conclusion

Home care is a vital component of the United States healthcare delivery system. The demand for home care has steadily increased over the past decade and it is projected that this increase will continue over the next several decades due to shifting population demographics. This projected U.S population demographic shift is widening the gap between the supply of working-age women and the demand of an increasingly aging population, placing substantial pressure on the healthcare delivery system to reduce its fragmentation and improve its effectiveness in order to adequately care for tomorrow’s aging population.

The PCA workforce is foundational to the home care delivery structure, providing upwards of 80 percent of all care received in the home. It is well-documented that the PCA’s level of career commitment and job satisfaction is directly related to the quality of care received by the home care recipient. Despite the critical role PCAs play in the delivery of home care, this sector of the healthcare paraprofessional is largely ignored by policy makers. Interventions must be developed to both increase career commitment and job satisfaction to increase retention of existing PCAs and the attractiveness and value of this work to increase recruitment of new PCAs. Specialized training interventions offer many benefits in meeting this goal and research clearly illustrates the many benefits of this type of intervention.
The ECAT training intervention was designed specifically for PCAs providing Medicaid home- and community-based personal care services to improve career commitment and job satisfaction by focusing the content on developing better coping mechanism in response to job-related stressors, life stressors, and other obstacles to providing quality personal home care, as well as, encouraging, empowering, and influencing participants to believe in their own abilities to communicate effectively with family members, supervisors, and clients.

Evaluation of ECAT included the use of the CCM and MSQ instruments to measure career commitment and job satisfaction through a pre- post-training administration. This study’s purpose was to evaluate the change in levels of career commitment and job satisfaction of groups based on age and extrinsic job satisfaction, and to examine the triumvirate relationship between the impact of a training intervention, and the influence of age and extrinsic job satisfaction. Primary analyses of the evaluation data included one-way ANCOVA to discover group differences. Post-hoc examinations included Tukey HSD to see which groups differed and paired samples t-test to explore within group differences.

Key findings of the analysis included a lack of statistical significant differences in terms of changes in career commitment and job satisfaction as a consequence of the training between age groups. Although age of the training participant did not have a differing influence on changes to career commitment or job satisfaction, post-hoc examinations did illustrate that participants of different ages responded differently to the training. Specifically, the study revealed that middle aged PCAs experienced a decline in
their sense of job satisfaction from pre- to post-training, and therefore, a particular focus on the design of training interventions must be made to increase a sense of intrinsic job satisfaction, while maintaining or improving the factors which cause a decrease in extrinsic job satisfaction, i.e., mainly frustrations due to not having the organizational support for workplace application of knowledge. Significant group differences based on pre-training levels of extrinsic job satisfaction were found in terms of overall career commitment and career planning, while not have a differing influence in terms of changes in career resilience or intrinsic job satisfaction. Lastly, interactions effects between age and extrinsic job satisfaction were not found as proposed in the study’s theoretical model.

The overall data in this study suggest that although age of the PCA does not having a differing influence on changes in career commitment or job satisfaction as a consequence of training, future training evaluations should include pre-training demographics to allow for further research into the characteristics of training participants that may lead to answers as to why training interventions affect participants differently. Furthermore, pre-training levels of extrinsic job satisfaction does have a differing influence on changes to career commitment as a consequence of training, and therefore, gaining insight into the job satisfaction levels of potential training participants can allow for greater effectiveness in the training intervention to positively change career commitment. Moreover, a training intervention which uses pre-training data can allow for selection criteria of potential training participants to be developed. Application of such a selection criterion provides the opportunity for the training content to be adjusted
according to the unique characteristics of the training participants resulting in a more specialized training intervention. The specificity and relevance of the training intervention to the participants affords the training intervention to be more effective in generating positive changes in career commitment and job satisfaction, and in turn, increases the recruitment and retention of the paraprofessional healthcare workforce.
REFERENCES


Nursing Institute at the University of Illinois College of Nursing. (2001). Who will care for each of us?: America’s coming health care crisis.


APPENDIX A: ENHANCED CARE ASSISTANT TRAINING SURVEY INSTRUMENT

Recognition, Respect, Responsibility: Enhanced Care Assistant Training

All individuals should complete this questionnaire when they first receive the training. When you come for your last training session, we will ask you to complete it again. Your answers are extremely valuable. Please provide an answer for each of the questions asked, unless instructed otherwise. Please also be sure to provide your Participant Identification Number. If responses on this survey can't be matched up with your other paperwork, it will be impossible for us to make important comparisons about the value of this training. This and any other forms you complete related to this project are strictly confidential. Your responses will not be linked with your name in any database. The data will be used for the purposes of evaluation only and all results will be grouped, so that no single person or organization may be distinguished. Your participation is completely voluntary. You have the right to withdraw at any time or refuse to answer any questions.

Participant Identification Number  
(LAST six digits of your social security number)

Agency/Facility Affiliation

____________________________________________________________________

1. What is your gender?  Male  Female

2. What is your racial background? (Check ONLY one)
   ___ American Indian or Alaska Native  ___ Hispanic or Latino
   ___ Under-represented Asian subgroup*  ___ Native Hawaiian or Other
   ___ Pacific Islander
   ___ Asian (not under-represented)  ___ White or Caucasian
   ___ Black or African American  ___ Other ____________ (please specify)
* Refers to any Asian other than Chinese, Filipino, Japanese, Korean, or Asian Indian

3. In what county or city do you work or practice?  Code Number _________
   (Refer to the County Code Sheet)

4. What is your approximate age? _______
5. What is your marital status?  Single Married Separated Divorced

6. What degrees/certifications do you currently hold? (Mark all that apply)

|__H.S. |__A.N.P. |__M.A. |__M.S. |__M.S.N. |__M.S.W. |__M.Ed. |__M.P.H. |__M.D. |__Ph.D. |__D.P.H. |__D.N.Sc/N.D. |
|_______|_______|_______|_______|_______|_______|_______|_______|_______|_______|_______|__________|
|__B.A. |__B.S. |__B.S.W. |__B.S.N. |__R.N. |__C.N.A. |__N.P.-C. |__A.N.P. |__M.A. |__M.S. |__M.S.N. |__M.S.W. |__D.S.W. |

7. From the list given below, please check the ONE category that best describes your occupational interest in either the Primary Care Professions, the Supporting Health Professions, or the Allied Health Professions. Please check only one discipline from the entire list given below. Refrain from using the Other category unless there is no other descriptor that subsumes your occupational affiliation.

**Primary Care Professions**

__1) Family Medicine__
__2) General Internal Medicine__
__3) General Pediatrics__
__4) Physician Assistants__
__5) Nurse Practitioners__
__6) Nurse-Midwives__
__7) Dentistry__
__8) Primary Care Podiatric Medicine__

**Supporting Health Professions**

__9) Allopathic Medicine__
__10) Osteopathic Medicine__
__11) Nurse Anesthetists__
__12) Other Advanced Practice Nurses__
__13) Undergraduate Nurses__
__14) Chiropractic__
__15) Dental Public Health__
__16) Health Administration__
__17) Public Health__
__18) Preventive Medicine__
__19) Pharmacy__
__20) Clinical/Counseling Psychology__
__21) Social Work__
__22) Other Supporting__

(please specify)

**Allied Health Professions**

__23) Clinical Laboratory Services__
__24) Food and Nutrition Services__
__25) Health Information__
Note: Allied Health Disciplines have been classified into the following categories/groups:

"Clinical Laboratory Services" refers to: Medical Laboratory Technicians, Medical Technologists, Phlebotomists, Cytotechnologists, and Histologic Technicians/Technologists.

"Food and Nutrition Services" refers to: Dietetic Technicians and Dieticians

"Health Information" refers to: Medical Records Technicians and Medical Transcriptionists

"Rehabilitation" refers to: Occupational Therapists, Occupational Therapy Assistants, Physical Therapists, Physical Therapy Assistants, Recreation Therapists, Speech Therapists/Audiologists, and Orthotists or Prosthetists.

"Technicians and Technologists" refers to: Clinical Perfusionists, Cardiopulmonary Technologists, Diagnostic Medical Sonographers, Electrocardiograph Technicians (EKG), Electroencephalograph Technicians (EEG), Medical Imaging Technologists, Nuclear Medicine Technologists, Ophthalmic Medical Technicians/Technologists, Radiation Therapy Technologists, Radiologic Technologists, Respiratory Therapists, Respiratory Therapy Technicians, Surgical Technologists, and Emergency Medical Technicians or EMT Paramedics.

"Dental" refers to: Dental Hygienists, Dental Assistants, and Dental Laboratory Technicians.

"Assistants" refers to Home Health Aides and Medical Assistants.

8. What is your primary place of employment? (Check ONE)
   ___ Adult Day Care
   ___ Alzheimer's Association
   ___ Assisted Living Facility (ACR)
   ___ Community-Based Agency
   ___ Government Agency
   ___ Home Care Agency
   ___ Hospice Care
   ___ Hospital
   ___ Medical Practice
   ___ Medical School
   ___ Nursing Home
   ___ Private Care Management
   ___ Other________________ (please specify)

9. On the average, for how many hours per week are you employed in your current position?
   hours/week

10. For how long have you been employed in your current position? _____ years

11. For how long have you been employed in your current career field? _____ years

12. Do you work predominantly with older persons (Age 60+)? Yes No
   12a. If yes, for about how many years have you been doing this? _____ years
13. Are you currently paid to provide direct care for someone with Alzheimer's disease? Yes No
   13a. If yes, how often do you provide this care over the normal course of your work day?
       Infrequently  Constantly
       1  2  3  4  5
   13b. If no, have you ever provided direct care for someone with Alzheimer's disease? Yes No
       If yes, how often did you provide this care over the normal course of your workday?
       Infrequently  Constantly
       1  2  3  4  5

14. Outside of any Alzheimer's care you may provide at work, would you consider yourself to be the primary caregiver for a friend or relative with Alzheimer's disease? Yes No
   a. If no, have you ever been a primary caregiver for a friend or relative with Alzheimer's disease? Yes No

15. Have you received any formal training in gerontology/geriatrics? Yes No
   a. If yes, please mark all that apply.
   ___ Passed ANA Gerontological certification exam
   ___ Obtained graduate certificate in aging studies
   ___ Through the VGEC or Department of Gerontology at VCU?
   ___ Completed Bachelors Degree in Geriatrics/Gerontology
   ___ Completed Master's Degree in Geriatrics/Gerontology
   ___ Completed requirements for a Minor in Geriatrics/Gerontology
   ___ Completed some individual courses in Geriatrics/Gerontology
   ___ Offered by the VGEC or Department of Gerontology at VCU?
   ___ Attended conferences, workshops, or other continuing education programs in aging
   ___ Previously attended "Person Centered Care" training offered by the Alzheimer's Association
   ___ Previously attended “Train the Trainer” training offered by the Alzheimer's Association
   ___ Previously attended other training related to Alzheimer's disease
   ___ Mentoring/Support program participation (e.g., through the Nursing Assistant Institute)
   ___ Other __________________________________________________________ (please specify)

16. To what extent do you anticipate an emphasis on long term care across the course of your career?
    Not at all  Extensively
    1  2  3  4  5

17. When looking for your next position, how will the opportunity to work in the area of long term care influence your decision?
    Negatively  Positively
    1  2  3  4  5
18. This survey asks questions about your line of work or career field in which you are currently employed. You may consider line of work/career field as having the same meaning as occupation, profession, or vocation. When completing this survey, ask yourself: How satisfied am I with this aspect of my job? Please answer using the scale below and circle the number that corresponds with your response for each item:
   VS = I am very satisfied with this aspect of my job.
   S = I am satisfied with this aspect of my job.
   N = I can’t decide whether I am satisfied or not with this aspect of my job.
   DS = I am dissatisfied with this aspect of my job.
   VDS = I am very dissatisfied with this aspect of my job.

On my present job, this is how I feel about:

<table>
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<tr>
<th></th>
<th>VDS</th>
<th>DS</th>
<th>N</th>
<th>S</th>
<th>VDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Being able to keep busy all the time</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. The chance to work alone on the job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>3. The chance to do different things from time to time</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. The chance to be “somebody” in the community</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. The way my boss handles his men</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. The competence of my supervisor in making decisions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. Being able to do things that don’t go against my conscience</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. The way my job provides for steady employment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. The chance to do things for other people</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. The chance to tell people what to do</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. The chance to do something that makes use of my abilities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. The way company policies are put into practice</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>13. My pay and the amount of work I do</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. The chances for advancement on this job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. The freedom to use my own judgment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. The chance to try my own methods of doing the job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>17. The working conditions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. The way my co-workers get along with each other</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>19. The praise I get for doing a good job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20. The feeling of accomplishment I get from the job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</tbody>
</table>

19. Please answer the following questions as honestly as you can. Circle the number to the right of each statement that best corresponds to your level of agreement.

<p>| | | | | |</p>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>My line of work is an important part of who I am.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>This line of work has a great deal of meaning to me.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>I do not feel “emotionally attached” to this line of work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4.</td>
<td>I strongly identify with my chosen line of work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5.</td>
<td>I do not have a strategy for achieving my goals in this line of work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6.</td>
<td>I have created a plan for my development in this line of work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>7.</td>
<td>I do not identify specific goals for my development in this line of work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>8.</td>
<td>I do not often think about personal development in this line of work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9.</td>
<td>The costs associated with my line of work sometimes seem too great.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10.</td>
<td>Given the problems I encounter in this line of work, I sometimes wonder if I get enough out of it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11.</td>
<td>Given the problems in this line of work, I sometimes wonder if the personal burden is worth it.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12.</td>
<td>The discomforts associated with my line of work sometimes seem to great.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>


Thank you for your participation in this important and timely project. If you have any questions or comments, please contact the VGEC Evaluator, Constance L. Coogle, Ph.D. (804/828-1525).
VITA

Jason Allan Rachel was born on October 28, 1974 in Irving, Texas. He graduated with a Bachelor of Science in Biology from Virginia Commonwealth University in 1996 and went on to earn a Master of Science in Gerontology in 2000, with an additional Certificate in Preparing Future Faculty. Mr. Rachel has worked in the past in the assisted living industry in both marketing and administration. During his doctoral studies, he held several positions at Virginia Commonwealth University at the Virginia Center on Aging and the Virginia Geriatric Education Center, as well as teaching in both the Departments of Gerontology and Health Administration. Mr. Rachel is currently the Money Follows the Person Rebalancing Demonstration Project Director at the Virginia Department of Medical Assistance Services.