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Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction

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Abstract

Formal and informal caregivers experience both negative and positive aspects of caregiving, such as burnout and compassion satisfaction. However, the existing literature primarily focuses on the experiences of family caregivers and nurses, but neglects nursing assistants. This study examined the relationships among personality, burnout, compassion satisfaction, work engagement, and job satisfaction in a sample of certified nursing assistants (CNAs) employed in healthcare settings. Additionally, this study compared CNA data collected prior to and during the COVID-19 pandemic. Participants completed self-report surveys measuring burnout, compassion satisfaction, personality factors, work engagement, job satisfaction, intent to quit, and demographics. Results indicated significant positive relationships between compassion satisfaction and agreeableness and extraversion, as well as between burnout and neuroticism. Significant negative relationships were found between burnout and agreeableness and extraversion, as well as between compassion satisfaction and neuroticism. Work engagement and job satisfaction were not found to moderate these relationships. CNAs who participated prior to the COVID-19 pandemic reported lower burnout and higher compassion satisfaction compared to CNAs who participated during the pandemic. However, there were no differences in job satisfaction or intent to quit. The current study provided novel information about CNA personality, burnout, compassion satisfaction, and levels of job satisfaction and work engagement. The findings may be useful in developing interventions for CNAs to bolster compassion satisfaction and decrease burnout to potentially reduce turnover rates.

Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction

In 2018, the U.S. population of adults 65 and older was 52.4 million, representing 16% of the total population; the older adult population is projected to increase to 94.7 million in 2060 (Administration on Aging, 2020). This dramatic increase in the older adult population will have significant societal impacts, including increasing the demand for healthcare and caregiving resources. In 2018, 21% of older adults 85 and older needed assistance with activities of daily living (Administration on Aging, 2020). Additionally, it is estimated that 8.3 million individuals utilized a long-term care (LTC) facility in 2016 and the demand for these services is expected to increase as the aging population grows (Harris-Kojetin et al., 2019). The 1,460,400 formal, or paid, caregivers employed in LTC facilities, including registered nurses (RNs), licensed practical nurses (LPNs), and certified nursing assistants (CNAs), will experience first-hand the impacts of the growing aging population and will need increased support to provide quality care (Harris-Kojetin et al., 2019).

Negative Impacts of Caregiving

The job duties and environmental factors that formal caregivers, such as RNs or CNAs, encounter in their workplaces can impact both the physical and mental health of the employee. The chemical and physical hazards unique to their occupation may make RNs and CNAs more susceptible to negative physical health outcomes such as musculoskeletal disorders, hypertension, poor and inadequate sleep, and put them at greater risk for developing cancers, including breast and rectal cancer (Cheng et al., 2019; Fronteira & Ferrinho, 2011; Papantonious et al., 2018; Schernhammer et al., 2001).

In addition to the physical impacts of caregiving, RNs and CNAs may experience burnout and compassion fatigue due to the high and persistent levels of stress related to providing patient care. Compassion fatigue occurs when the individual no longer feels emotionally able to respond to and manage the difficulties of caring for others (Boyle, 2015). Burnout entails physical and emotional exhaustion paired with a lack of concern or care for others (Heine, 1986). Several factors can increase compassion fatigue and burnout in formal caregivers, including inadequate staffing, dealing with physically threatening or demanding patients, and having a high workload (Jenkins & Elliot, 2004). However, many formal caregivers often believe that fatigue and burnout are part of the career (Steege & Rainbow, 2017).

Positive Impacts of Caregiving

Despite the potential detrimental impacts to physical and mental health, formal caregivers also experience many positive benefits from providing care to others. For example, RNs and CNAs may experience compassion satisfaction, which is the pleasure derived from performing one's work well and a general positive feeling about one's ability to help others (Stamm, 2010). Predictors of compassion satisfaction in RNs include receiving meaningful recognition at work, having higher job satisfaction, and maintaining adequate sleep quality (Bellicoso et al., 2017; Hunsaker et al., 2015; Kelly et al., 2015).

Caregiver Turnover

Although formal caregivers may experience compassion satisfaction, factors such as job stress, physical and emotional fatigue, feelings of depersonalization, a lack of shared employee beliefs and values, and poor organizational support, can culminate in an individual's decision to quit their job (Eltaybani et al., 2018; Lee & Jang, 2020; Lu et al., 2019; Meeusen et al., 2011). Staff turnover refers to the proportion of an organization's staff members that terminated

employment with the organization in a set period of time (Donoghue, 2010). Turnover of RNs and CNAs working in LTC facilities was estimated to be on average 50% for RNs and 51.2% for CNAs in 2012 (American Health Care Association, 2014). High turnover rates result in high costs for facilities, poorer quality of resident care, and increased problematic resident behaviors (Boushey & Glynn, 2012; Lerner et al., 2014).

Job Satisfaction

A factor that may impact turnover rates is job satisfaction. Job satisfaction refers to the degree of fulfillment and happiness employees receive from their job and is indicative of employees' ability and desire to perform their job well (Hoffman-Miller, 2019). Factors such as autonomy, advancement opportunity, and team cohesion may be influential for RN and CNA job satisfaction when working in LTC facilities (Lu et al., 20120; Squires et al., 2015). The impact of low job satisfaction among caregivers can be pervasive through the LTC facility. Higher rates of turnover and absenteeism, greater emotional exhaustion and burnout, and lower patient and family member satisfaction may result from low job satisfaction (Lu et al., 2012: McHugh et al., 2011).

Work Engagement

Another factor that impacts care outcomes and caregiver well-being is work engagement, or the positive and fulfilling state of mind in which individuals are dedicated and completely immersed in their work (Bargagliotti, 2012). Work engagement has been found to be positively correlated with performance feedback, social support from coworkers, and supervisory coaching or mentorship (Bakker et al., 2008; Garcia-Sierra et al., 2016). High work engagement leads to higher compassion satisfaction and job satisfaction, and may help to reduce burnout and intention to leave a current job (Keyko et al., 2016).

COVID-19

The continuing COVID-19 pandemic due to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has created challenges across the globe, particularly for those involved with healthcare. As of May 4, 2021, the United States has reported 32.2 million total cases and 574,220 deaths due to COVID-19 (Centers for Disease Control and Prevention, 2021). LTC facilities are in a state of crisis, with individuals living in LTC facilities at a higher risk for more severe illness or death from the virus (Ouslander & Grabowski, 2020). As of April 18, 2021, a total of 1.2 million residents and employees of LTC facilities have been infected by the virus (Centers for Medicare & Medicaid Services, 2021). Additionally, 133,820 deaths from COVID-19 were reported among residents and employees of LTC facilities (Centers for Medicare & Medicaid Services, 2021). The LTC environment allows for easy transmission of the virus, due to a congregate living setting and the inability of nursing assistants to practice social distancing measures when assisting residents with activities of daily living, such as bathing, dressing, and toileting (Ouslander & Grabowski, 2020).

With the ease of viral transmission in LTC facilities, staff members experience stressors in addition to those associated with everyday tasks. One of the most notable difficulties is increased staff shortages due to illness, which can negatively impact the quality of patient care as well as staff morale (White et al., 2020). Other challenges experienced by LTC staff include changing COVID-19 protocols, insufficient personal protective equipment supply, and lack of COVID-19 testing (White et al., 2021).

Aside from impacts on job specific tasks and supplies, the pandemic has created emotional and psychological issues for both staff and residents. For example, residents may have increased feelings of loneliness due to limitations on visitors and social distancing or isolation

policies (Mo & Shi, 2020). Throughout the pandemic, LTC staff have felt overworked, helpless, and challenged by the uncertainty of the pandemic (Mo & Shi, 2020). In addition to the increased stress of COVID-19 protocols and staffing shortages, LTC staff may be impacted psychologically by the emotional distress and deaths of residents during this time. Blanco-Donoso et al. (2020) report increased levels of secondary traumatic stress for LTC staff during the pandemic, which was exacerbated by greater exposure to resident suffering and death. The psychological impact of COVID-19 compounded with the already present job related stressors and burnout for LTC staff will continue to have lasting impacts throughout the pandemic. Therefore, identifying and creating the necessary supports for direct care workers is crucial.

Five Factor Model of Personality

The five-factor model of personality, sometimes referred to as the "Big Five", that is commonly used today was originally adapted from Tupes and Christal's (1961) model. The original personality model was further refined to arrive at the following five factors: neuroticism, extraversion, openness, agreeableness, and conscientiousness (McCrae & Costa, 1987). Job satisfaction has been studied in relation to personality factors, specifically examining how personality factors may influence employees' moods at work, how they interpret characteristics of their job, or the likelihood of achieving success at their job (Judge et al., 2002). Several studies have also examined relationships between the personality factors and burnout and compassion satisfaction for a variety of careers. Compassion satisfaction tends to be positively correlated with conscientiousness, extraversion, and agreeableness, and negatively correlated with neuroticism (Barr, 2018; Chen et al., 2018; O'Mahony et al., 2018). Burnout has been found to be positively correlated with neuroticism and negatively correlated with agreeableness, conscientiousness, and extraversion (Alacron et al., 2009; Barr, 2018; O'Mahony et al., 2018).

Within formal caregiving professions, most research regarding personality factors and burnout and compassion satisfaction has focused on RNs rather than CNAs. These studies indicated RNs with high neuroticism scores tend to have higher levels of burnout, perhaps due to the individual being more reactive to stress and less able to cope with the difficulties and stressors of caring for patients (Gallardo & Rhode, 2018; Pérez-Fuentes et al., 2019). Few studies have examined the relationships between personality factors, burnout, and compassion satisfaction in addition to work engagement and job satisfaction. More specifically, few studies have examined these aforementioned factors within the caregiving field. Kim et al. (2017) found that compassion satisfaction and burnout mediated the relationship between type D personality and job satisfaction in a nursing sample. It may be beneficial to understand how job satisfaction or work engagement may influence the relationship of personality and compassion satisfaction and burnout, specifically for nursing staff, including CNAs.

Current Study

Previous research has established relationships between personality factors and burnout and compassion satisfaction (Alacron et al., 2009; Barr, 2018; Chen et al., 2018; O'Mahony et al., 2018). However, few studies have examined these relationships within the caregiving field, specifically with CNAs employed in a LTC facility. Moreover, research regarding work engagement and job satisfaction as potential moderators of the relationships between personality and burnout and compassion satisfaction is sparse. The current study focused on a sample of CNAs employed in healthcare, including LTC and hospital settings. It was hypothesized that compassion satisfaction would be positively correlated with agreeableness and extraversion, and negatively correlated with neuroticism. It was also hypothesized that burnout would be positively correlated with neuroticism and negatively correlated with agreeableness and extraversion.

Further, it was hypothesized that work engagement would moderate the relationships between compassion satisfaction and agreeableness, as well as between burnout and neuroticism. It was also hypothesized that job satisfaction would moderate the relationship between compassion satisfaction and extraversion, and between burnout and neuroticism. Focusing on LTC CNAs will add to the limited literature regarding personality and burnout and compassion satisfaction. This study will add depth to our understanding of turnover of caregivers within LTC settings and how to best support these individuals. Further, the current study aimed to understand how the ongoing COVID-19 pandemic may be related to levels of burnout, compassion satisfaction, job satisfaction, and intent to quit for CNAs in healthcare settings.

Method

Participants

Participants (N = 100) were recruited from ten LTC facilities in southwestern Ohio and various LTC and hospital settings from across the United States. The original data collection began in late February 2020 with participant recruitment from LTC facilities in southwestern Ohio. This phase of data collection yielded 39 participants. Participant recruitment difficulties began in March 2020 due to COVID-19-related limitations on collecting data in-person at facilities. Online data collection efforts, which occurred from July 2020 to December 2020, with ten Ohio LTC facilities during the pandemic increased the total participants to 69. To facilitate additional participant recruitment to the minimum number of participants established during the proposal, in January and February of 2021, Amazon MTurk was utilized to recruit the remaining participants. As a result, 31 of the total 100 participants were recruited from Amazon MTurk. The use of Amazon MTurk for data collection resulted in participant recruitment from both LTC and hospital settings due to insufficient ability to filter out nursing assistants employed at settings

other than LTC facilities. The MTurk participant recruitment allowed any individual who had a job title of nursing assistant (NA), certified nursing assistant (CNA), state tested nurse aide (STNA), or a similar title participate. As a result, of the 31 MTruk participants, 17 were employed in a hospital setting, 11 were employed in a LTC facility, and 3 did not report a place of employment. In total, of the 100 participants, 78 were employed in a LTC facility, 17 were employed in a hospital setting, and 5 did not report a place of employment.

Regardless of participant recruitment method, full- and part-time CNAs, nurse aides, and STNAs who were over the age of 18, literate, and fluent in English were eligible to participate. The sample was a majority female (79%) and identified as White/European American (66%). Eighty-one percent of the sample reported full-time employment, 63% reported working a majority of their time in memory-care units, and 58% of the sample had a job title of state tested nurse aide. Table 1 and Table 2 provide more detailed participant demographic information.

Measures

Big Five Inventory – 2 Short (BFI-2-S; Soto & John, 2017a)

The BFI-2-S is a 30-item measure of the five-factor model of personality (Appendix A). Individuals rate each item on a 5-point Likert-type scale ranging from 1 (*Disagree Strongly)* to 5 *(Agree Strongly)*. The item scores are totaled for each of the five factors (i.e., extraversion, agreeableness, conscientiousness, neuroticism, and open-mindedness). Each factor score includes six individual items that are unique to one factor. Domain scores range from 6 – 30. Higher scores on each factor score indicate a greater presence of the personality factor for the individual completing the inventory. For the current study, the Cronbach's alpha for the Extraversion scale was .74, the Agreeableness scale was .70, and the Neuroticism scale was .80, demonstrating acceptable to good internal consistency reliability.

The BFI-2-S is a shortened form of the Big Five Inventory – 2 (BFI-2; Soto & John, 2017b). The BFI-2-S was designed to create a personality measure with reduced participant fatigue and careless responding potential, and as such, is recommended for studies with concerns about participant fatigue and total participant time required (Soto & John, 2017a). The BFI-2 demonstrates strong retest reliability (r = .76), as well as strong convergent validity with the NEO-Five Factor Inventory (r = .75) and with the NEO Personality Inventory – Revised (r = .72). The BFI-2-S retains approximately 90% of the BFI-2 domain scales' reliability, self-peer rating agreement, and external validity (Soto & John, 2017a).

Professional Quality of Life Scale 5 (ProQOL 5; Stamm, 2010)

The ProQOL 5 is a 30-item measure of compassion satisfaction, burnout, and secondary traumatic stress used for helping professions, such as healthcare professionals, social service workers, teachers, and police officers (Appendix B). Individuals rate each item on a 5-point Likert-type scale ranging from 1 (*Never*) to 5 (*Very Often*). Domain scores are totaled using ten non-overlapping items for compassion satisfaction, burnout, and secondary traumatic stress. Higher scores indicate higher levels of the compassion satisfaction, burnout, or secondary traumatic stress. Due to the scope of the current study, the secondary traumatic stress core will not be collected, resulting in a 20-item measure of compassion satisfaction and burnout. For the current study, the Cronbach's alpha for the Burnout scale was .82, and was .89 for the Compassion Satisfaction scale, demonstrating good internal consistency reliability.

The ProQOL 5 demonstrates strong construct validity and each scale measures a distinct construct. The measure is a widely used and accepted measure of compassion satisfaction, burnout, and secondary traumatic stress in studies with helping professions (Stamm, 2010). Further, the ProQOL is one of the most commonly used measure of compassion satisfaction and

fatigue in caregiving research, although limited research has been done utilizing the ProQOL with a CNA population in a LTC setting (Dreher et al., 2019; Gallardo & Rohde, 2018; Shahar et al., 2019; Yang & Kim, 2012).

Employee Engagement – X (EE-X; Mullins et al., 2015)

The EE-X is a 15-tem measure of work engagement (Appendix C). Individuals rate each item on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The individual items are totaled into a Total Engagement and ranges from 15 – 75 Higher scores indicate higher levels of engagement. For the current study, the Cronbach's alpha for the Total Engagement scale score was .88, demonstrating good internal consistency reliability.

The EE-X was originally developed by Industrial/ Organizational Psychology graduate students at Xavier University who created the measure to assess levels of employee work engagement among local and regional organizations (Mullins et al., 2015).). Initial validation analyses revealed the EE-X is highly correlated with Rich et al.'s (2010) Job Engagement Scale (r = .89).

Job Satisfaction Survey (Scarpello & Campbell, 1983)

One question, *How satisfied are you with your job in general?*, was used to measure overall job satisfaction (Scarpello & Campbell, 1983, p. 584; Appendix D). Participants answered the job satisfaction item with a 5-point Likert-type scale ranging from 1 (*Not at All Satisfied*) to 5 (*Completely Satisfied*). A higher score on the item indicates greater job satisfaction. Scarpello and Campbell (1983) indicate a single item of overall job satisfaction is not affected by the factors that may not relate to job satisfaction for the individual. A meta-analysis of 17 studies found convergent validity between single item measures of job satisfaction

and job scales (r = .67; Wanous et al., 1997). Single item measures of overall job satisfaction are acceptable in comparison to using longer scales.

Intention to Quit Scale

A self-developed measure of CNA intention to quit their current employer adapted from Mobley et al. (1978) was used (Appendix E). The measure consisted of two items answered on a 5-point Likert type scale ranging from 1 (*Completely Disagree*) to 5 (*Completely Agree*). The scores of the two items will be totaled for a total intention to quit score. A higher score indicates greater intention to quit. For the current study, the Cronbach's alpha for the total intent to quit scale was .84, demonstrating good internal consistency reliability.

Demographics

Participants completed a demographics questionnaire (Appendix F). The questionnaire contained items to collect participant background information including the participant's age, sex and gender, race and ethnicity, years of experience as a CNA, and start date at the current facility.

Procedure

Permission was obtained from administrators of the Ohio long-term care facilities and approval was obtained from the Xavier University Institutional Review Board (IRB) prior to collecting data from these LTC facilities and MTurk (Appendix G and Appendix H).

Data Collection

Participants (N = 100) were recruited from ten LTC facilities in Ohio, and from other LTC facilities and hospitals in the United States. Initially, data was collected in person at facilities in southwestern Ohio. The facility administrator sent an announcement to staff members regarding the opportunity to participate and times and dates of data collection

(Appendix I). The flyer included a link to the online Qualtrics version of the study if individuals who were interested in participating were unable to attend the in-person data collection times. With the progression of the COVID-19 pandemic, it became a potential health risk to continue in-person data collection and data collection was modified to involve only online participation. Similar methods were used for online data collection, with the facility administrator sending an email to staff members regarding the study opportunity as well as a link to the online survey. As the pandemic continued, online data collection efforts broadened to include three other Ohio LTC facilities in addition to the southwestern Ohio facilities. As a final effort to increase study participation, the online data collection efforts were then broadened to include the entire United States through the use of Amazon MTurk. A brief description of the study was posted on the MTurk website as well as a link to the Qualtrics survey.

In-person data collection occurred during shift changes throughout the day and during break periods for LTC nursing assistants. The principal investigator was present for the in-person data collection and approached nursing assistants to invite them to participate in a 10-to-20-minute study. A paper informed consent form was offered to the participant; they were asked to read the consent form and provide verbal consent prior to completing the survey (Appendix J). After verbal consent was obtained, a paper survey packet was distributed to the participant to complete. Once the entire survey was completed, participants were given a debriefing form, which was reviewed with the principal investigator (Appendix K). Participants were then able to sign up for a drawing for a $50 Kroger gift card on a separate sign-up sheet that was not connected to the participant's survey packet.

For the online data collection, participants were given a link to the Qualtrics survey. They were first prompted to review the informed consent form and indicated they reviewed the form

and agreed to participate by selecting the appropriate response on the Qualtrics survey. Participants then completed all measures and were prompted to review the debriefing form. A separate Qualtrics link was provided for participants to enter the Kroger gift card drawing. Participants recruited through MTurk, received a $7 compensation that was delivered through the MTurk website within three days of survey completion.

Results

Table 3 provides descriptive data for the study measures. Table 4 provides a correlation matrix of the study variables. The original participant recruitment plan included CNAs who were employed in LTC facilities and no hospital employed participants. However, as described in the method section, participant recruitment difficulties due to COVID-19 resulted in 17 hospital employed CNAs being included in the sample. A series of independent-samples *t*-tests were conducted to investigate potential differences between the LTC and hospital employed groups. There were no significant differences in compassion satisfaction scores for the LTC employed (M = 41.64, SD = 6.45) and the hospital employed CNAs (M = 41.41, SD = 4.65), $t(91) = .14$, $p = .89$. There were no significant differences in burnout scores for the LTC employed (M = 23.54, SD = 7.03) and the hospital employed CNAs (M = 24.82, SD = 3.79), $t(90) = .73$, $p = .47$. There were no significant differences in work engagement for the LTC employed (M = 59.78, SD = 9.83) and the hospital employed CNAs (M = 61.18, SD = 6.35), $t(91) = .56$, $p = .58$. There were no significant differences in job satisfaction scores for the LTC employed (M = 3.32, SD = 1.22) and the hospital employed CNAs (M = 3.65, SD = .70), $t(91) = 1.06$, $p = .29$.

Further, there were no significant differences in extraversion scores for the LTC employed (M = 22.19, SD = 4.60) and the hospital employed CNAs (M = 20.11, SD = 3.08), $t(91) = 1.78$, $p = .08$. There were no significant differences in agreeableness scores for the LTC

employed (M = 25.58, SD = 3.72) and the hospital employed CNAs (M = 24.88, SD = 3.82), $t(91) = .70$, $p = .49$. There were no significant differences in conscientiousness scores for the LTC employed (M = 25.77, SD = 3.90) and the hospital employed CNAs (M = 24.65, SD = 4.49), $t(91) = 1.05$, $p = .30$. There were no significant differences in neuroticism scores for the LTC employed (M = 14.09, SD = 5.13) and the hospital employed CNAs (M = 15.30, SD = 3.98), $t(91) = .91$, $p = .36$. There were no significant differences in openness scores for the LTC employed (M = 22.47, SD = 3.97) and the hospital employed CNAs (M = 21.41, SD = 4.06), $t(91) = .99$, $p = .32$. Since there were no significant differences between the LTC employed and hospital employed CNA groups on the factors of compassion satisfaction, burnout, work engagement, job satisfaction, and the five personality factors, all participants were included in the analyses. Correlational analyses were conducted to understand the relationships between burnout, compassion satisfaction, and personality factors.

To test the hypothesis that there was a significant relationship between compassion satisfaction and agreeableness, a Pearson product moment correlation coefficient was conducted with the compassion satisfaction total score on the ProQOL (Stamm, 2010) and the total agreeableness score on the BFI-2-S (Soto & John, 2017a). Compassion satisfaction was significantly correlated with agreeableness, r (98) = .50, $p < .001$.

To test the hypothesis that there was a significant relationship between compassion satisfaction and extraversion, a Pearson product moment correlation coefficient was conducted on the compassion satisfaction total score on the ProQOL (Stamm, 2010) and the total extraversion score on the BFI-2-S (Soto & John, 2017a). Compassion satisfaction was significantly correlated with extraversion, r (98) = .42, $p < .001$.

To test the hypothesis that there was a significant relationship between compassion satisfaction and neuroticism, a Pearson product moment correlation coefficient was conducted on the compassion satisfaction total score on the ProQOL (Stamm, 2010) and the total neuroticism score on the BFI-2-S (Soto & John, 2017a). Compassion satisfaction was significantly correlated with neuroticism, r (98) = -. 50, $p < .001$.

To test the hypothesis that there was a significant relationship between burnout and neuroticism, a Pearson product moment correlation coefficient was conducted on the burnout total score on the ProQOL (Stamm, 2010) and the total neuroticism score on the BFI-2-S (Soto & John, 2017a). Burnout was significantly correlated with neuroticism, r (98) = .65, $p < .001$.

To test the hypothesis that there was a significant relationship between burnout and agreeableness, a Pearson product moment correlation coefficient was conducted on the burnout total score on the ProQOL (Stamm, 2010) and the total neuroticism score on the BFI-2-S (Soto & John, 2017a). Burnout was significantly correlated with agreeableness, r (98) = -.53, $p < .001$.

To test the hypothesis that there was a significant relationship between burnout and extraversion, a Pearson product moment correlation coefficient was conducted on the burnout total score on the ProQOL (Stamm, 2010) and the total extraversion score on the BFI-2-S (Soto & John, 2017a). Burnout was significantly correlated with extraversion, r (98) = -.46, $p < .001$.

To test the hypothesis that work engagement moderated the relationship between compassion satisfaction and agreeableness, a moderated multiple regression was conducted. In the first step of the model, the total compassion satisfaction scores on the ProQOL (Stamm, 2010) and total work engagement scores (Mullins et al., 2015) were entered as independent variables and total agreeableness scores on the BFI-2-S (Soto & John, 2017a) were entered as the dependent variable. The interaction term between work engagement and compassion satisfaction

was entered into the second step of the multiple regression model. Work engagement did not moderate the relationship between compassion satisfaction and agreeableness, $\Delta R^2 = .003$, F (1, 96) = .40, $p = .53$. However, compassion satisfaction and work engagement were significant predictors of agreeableness, F (2, 97) = 18.87, $p < .001$.

To test the hypothesis that work engagement moderated the relationship between burnout and neuroticism, a moderated multiple regression was conducted. Total burnout scores on the ProQOL (Stamm, 2010) and total work engagement scores (Mullins et al., 2015) were entered as the independent variables and total neuroticism scores on the BFI-2-S (Soto & John, 2017a) were entered as the dependent variable into the first step of the model. The work engagement and burnout interaction term was entered into the second step of the multiple regression model. Work engagement did not moderate the relationship between burnout and neuroticism, $\Delta R^2 = .007$, F(1, 95) = 1.14, $p = .29$. However, burnout and work engagement were significant predictors of neuroticism, F (2, 96) = 34.14, $p < .001$.

To test the hypothesis that job satisfaction moderated the relationship between compassion satisfaction and extraversion, a moderated multiple regression was conducted. The total compassion satisfaction scores on the ProQOL (Stamm, 2010) and job satisfaction scores were entered as independent variables and total extraversion scores on the BFI-2-S (Soto & John, 2017a) were entered as the dependent variable into the first step of the model. The job satisfaction and compassion satisfaction interaction term was entered into the second step of the multiple regression model. Job satisfaction did not moderate the relationship between compassion satisfaction and extraversion, $\Delta R^2 = .01$, F (1, 96) = 1.67, $p = .200$. However, compassion satisfaction and job satisfaction were significant predictors of extraversion, F (2, 97), $p < .001$.

To test the hypothesis that job satisfaction moderated the relationship between burnout and neuroticism, a moderated multiple regression was conducted. In the first step of the model, the total burnout scores on the ProQOL (Stamm, 2010) and job satisfaction scores were entered as the independent variables and total neuroticism scores on the BFI-2-S (Soto & John, 2017a) were entered as the dependent variable. The job satisfaction and burnout interaction term was entered into the second step of the model. Job satisfaction did not moderate the relationship between burnout and neuroticism, $\Delta R^2 = .006$, F (1, 95) = 1.01, $p = .32$. However, burnout and job satisfaction were significant predictors of neuroticism, F (2, 96), $p < .001$.

Supplemental Analyses

Additional analyses were conducted to investigate potential differences in burnout, compassion satisfaction, work engagement, job satisfaction, and intent to quit among participants who completed the survey prior to COVID-19 related shutdowns (pre-COVID shutdown participants) and participants who completed the survey during COVID-19 related shutdowns (current COVID shutdown participants). Independent-samples *t*-tests were conducted to compare total burnout and compassion satisfaction scores from the ProQOL (Stamm, 2010), total work engagement scores from the EE-X (Mullins et al., 2015), job satisfaction scores, and scores on the intent to quit items. There were significant differences in compassion satisfaction scores for the pre-COVID ($M = 43.11$, $SD = 5.64$) and the current COVID shutdown participants ($M = 40.46$, $SD = 6.32$), $t(96) = 2.15$, $p = .03$, $\eta^2 = .05$, such that pre-COVID participants reported higher levels of compassion satisfaction compared to current COVID participants. There were significant differences in burnout scores for the pre-COVID ($M = 21.86$, $SD = 6.39$) and the current COVID shutdown participants ($M = 25.22$, $SD = 6.40$), $t(95) = -2.57$, $p = .01$, $\eta^2 = .06$,

such that pre-COVID participants reported lower levels of burnout compared to current COVID participants.

There were no significant differences in work engagement scores for the pre-COVID (M = 60.93, SD = 8.25) and current COVID shutdown participants (M = 59.34, SD = 10.05), $t(96)$ = .84, p = .41. There were no significant differences in job satisfaction scores for the pre-COVID (M = 3.38, SD = 1.13) and the current COVID shutdown participants (M = 3.38, SD = 1.18), $t(96)$ = .03, p = .98. There were no significant differences in intent to quit scores for the pre-COVID (M = 2.69, SD = 1.47) or the current COVID shutdown participants (M = 2.54, SD = 1.19), $t(96)$ = .56, p = .57.

Discussion

The purpose of the current study was to investigate the relationships between CNA's Big Five personality factors and burnout and compassion satisfaction. The current study also aimed to examine the potential moderating effects of job satisfaction and work engagement on the aforementioned relationships. Lastly, the current study explored differences in levels of CNA burnout, compassion satisfaction, job satisfaction, and intent to quit throughout the ongoing COVID-19 pandemic.

Six hypotheses examined the relationships between CNA's personality factors and burnout and compassion satisfaction. It was expected that compassion satisfaction would be positively correlated with agreeableness, as well as positively correlated with extraversion. The two relationships were significant, confirming the hypotheses. CNAs who reported higher levels of compassion satisfaction had higher levels of agreeableness traits, such as being good natured, sympathetic, adaptable, and courteous. Additionally, CNAs who reported higher levels of compassion satisfaction had higher levels of extraversion traits, such as being sociable, talkative,

and assertive. These results are consistent with previous studies regarding compassion satisfaction and the personality factors of agreeableness and extraversion (Barr, 2018; Chen et al., 2018; O'Mahony et al., 2018). As previous studies have examined this relationship within a nurse population, this is a novel finding within a CNA population working in healthcare settings.

In the current study, it was also expected that compassion satisfaction would be negatively correlated with neuroticism. The relationship was significant, confirming the hypothesis. CNAs who reported lower levels of compassion satisfaction had higher levels of neuroticism traits, such as being worry-prone, insecure, and temperamental. Again, this finding confirms the results of previous studies that found a negative relationship between compassion satisfaction and neuroticism within a sample of nurses (Barr, 2018; Chen et al., 2018; O'Mahony et al., 2018), but this is a novel finding within the CNA population.

The fourth hypothesis, which predicted that burnout would be positively correlated with neuroticism, was confirmed. CNAs with higher levels of burnout had higher levels of neuroticism traits. This finding is consistent with previous studies examining personality traits and burnout within nursing samples (Alacron et al., 2009; Barr, 2018; O'Mahony et al., 2018). In the current study, it was also expected that burnout would be negatively correlated with agreeableness, as well as with extraversion. Both relationships were significant, confirming the hypotheses. CNAs with lower levels of burnout had higher levels of agreeableness traits, and higher levels of extraversion traits. Again, these results support previous research about the relationship between burnout and agreeableness and extraversion (Alacron et al., 2009; Barr, 2018; O'Mahony et al., 2018). While the literature has previously examined the correlational relationships between burnout and compassion satisfaction with personality factors in nursing populations, this is the first study to investigate these relationships in a CNA sample.

The present study also investigated the potential moderating effect of job satisfaction and work engagement on the previously discussed correlational relationships. Predicted work engagement was expected moderate the relationship between compassion satisfaction and agreeableness such that the relationship between compassion satisfaction and agreeableness would be positive when work engagement was high, but not when work engagement was low. This hypothesis was not supported; however, compassion satisfaction and work engagement were significant predictors of agreeableness. Higher levels of compassion satisfaction and work engagement were predictive of a CNA demonstrating greater agreeableness personality traits, such as being adaptable and courteous. Additionally, predicted work engagement was expected to moderate the relationship between burnout and neuroticism, such that the relationship between burnout and neuroticism would be positive when work engagement was high, but not when work engagement was low. This hypothesis was also not supported; however, burnout and work engagement were significant predictors of neuroticism. Higher levels of burnout and lower levels of work engagement were predictive of greater neuroticism traits in the CNA, such as being worry-prone and temperamental. Previous studies have not examined the potential moderating role of work engagement on the relationship between personality factors and burnout and compassion satisfaction within a CNA population. These results, while not significant for a moderation effect, may indicate that CNAs with greater levels of agreeableness and lower levels of neuroticism will likely have overall higher levels of work engagement and compassion satisfaction, and lower levels of burnout.

The potential moderating effect of job satisfaction was also investigated in the present study. It was predicted that job satisfaction would moderate the relationship between compassion satisfaction and extraversion, such that the relationship between compassion satisfaction and

extraversion would be positive when job satisfaction was high, but not when job satisfaction was low. This hypothesis was not supported; however, compassion satisfaction and job satisfaction were significant predictors of extraversion. Higher levels of compassion satisfaction and job satisfaction were predictive of greater extraversion traits in the CNAs, such as being sociable and assertive. Job satisfaction was expected to moderate the relationship between burnout and neuroticism, such that the relationship between burnout and neuroticism would be positive when job satisfaction was low, but not when job satisfaction was high. This hypothesis was not supported; however, burnout and job satisfaction were significant predictors of neuroticism. High levels of burnout and low levels of job satisfaction were predictive of greater CNA neuroticism traits. Previous studies have not examined the moderating effect of job satisfaction on relationships between compassion satisfaction, burnout, and personality traits. However, Kim et al., (2017) found a mediating effect of compassion satisfaction and burnout on the relationship between type D personality and job satisfaction in a nursing sample. An individual with a type D personality may be more prone to negative affect, chronic stress, and tend to avoid self-disclosure within social interactions (Kim et al., 2017). Type D personality has similar features to an individual who has neuroticism traits and may be lacking high levels of extraversion traits. While the mediation effect examined in the Kim et al. (2017) study was different from the proposed moderation effect in the current study, both studies demonstrate lower levels of compassion satisfaction and greater levels of burnout for individuals who tend to display more negative affect and have passive coping mechanisms.

The results of the current study suggest that CNAs with high levels of agreeableness and extraversion, and low levels of neuroticism, will likely have greater compassion satisfaction and lower burnout. It is likely not feasible for facilities to only employ CNAs who demonstrate these

specific personality traits as it would decrease the potential employee pool. However, it may be worthwhile to acknowledge that factors outside of an administrator's control are associated with burnout and compassion satisfaction. Finding ways to support individuals who may be more susceptible to burnout may help to reduce overall job dissatisfaction or turnover rates. For example, CNAs who are more extraverted may be better able to actively seek out emotional support from others during times of increased job stress, thus resulting in lower levels of burnout. Individuals who are less extraverted may be less likely to seek this type of support. While the individual may want emotional or social support, they are less sociable and outgoing, thus limiting their outlets for support. These CNAs may benefit from managers or supervisors who regularly check in on their emotional and mental well-being, or offer and encourage CNAs to utilize various resources for emotional support.

Further, CNAs who are high in neuroticism may be more susceptible to burnout due to high emotional reactivity in times of stress and less able to cope with the challenges of caregiving. Westermann et al. (2012) found interventions that combined relaxation techniques, teaching coping skills, and increasing job control had lasting effects on burnout among nursing staff in long-term care. The suggested interventions for increasing job control included standardizing job tasks and implementing activities to increase patient well-being (Westermann et al., 2012). Administrators of LTC facilities may witness decreased CNA burnout through the implementation of such interventions. Likewise, CNAs who have high levels of neuroticism may benefit through organizational supports such as relaxation and coping skill trainings.

The present study also examined differences of burnout, compassion satisfaction, job satisfaction, and intent to quit prior to and during COVID-19 shutdowns. CNAs reported significantly higher burnout and lower compassion satisfaction scores during COVID-19

shutdown as compared to CNAs before the onset of the pandemic. However, there were no significant differences in job satisfaction or intent to quit. Previous studies have found job satisfaction to be positively correlated with compassion satisfaction and negatively correlated with burnout (Kelly & Lefton, 2017; Palazoglu & Koc, 2019). However, the current study may suggest that there may be additional factors that influence CNAs to have stable job satisfaction and intent to quit despite increasing levels of burnout and decreasing levels of compassion satisfaction during the pandemic. Regardless, the current study did not measure turnover rates of CNAs throughout the pandemic and no conclusive statements can be made regarding how many participants remained employed throughout the pandemic.

Reports from LTC facilities across the country indicate the presence of staffing shortages and increased turnover rates throughout the pandemic (Spanko, 2021). Several factors have been reported to contribute to nursing staff decisions to quit or stop working during the pandemic, including lack of sufficient personal protective equipment, fear of contracting the virus, increased income through unemployment payments, and an increased need to stay home to provide childcare (Emanuel, 2020; Xu et al., 2020). Although some LTC facilities have offered incentives, such as increased pay, to retain nursing staff, turnover rates remain high (Regan, 2021). The high turnover rates and staffing shortages in LTC facilities will likely remain a problem throughout the pandemic unless efforts are taken to better support the physical safety, financial well-being, and overall well-being of nursing staff.

Limitations

A primary limitation of the current study is the sample. The researcher's original intent was to recruit participants solely from LTC facilities, as this has been a largely neglected population in terms of research. However, the COVID-19 pandemic presented significant

challenges to data collection. Despite several efforts to increase participation from CNAs in LTC facilities, the use of Amazon MTurk resulted in participation of CNAs from a variety of healthcare settings. After conducting independent samples *t*-tests, there were no significant differences in overall scores for CNAs employed in LTC facilities and CNAs employed in other healthcare settings. However, the sample of hospital employed participants was a small percentage of the total participants. The hospital employed participant sample is too small to make definitive statements that there are no differences between LTC and hospital employed CNAs. Future research should attempt to replicate these findings with a larger hospital employed participant sample in order to better understand potential differences between CNA employment settings. Due to an abundance of caution, the researcher is wary of generalizing the results of the current study to CNAs in LTC facilities, specifically.

Another limitation of the present study is the use of self-report measures. Self-report data can result in response bias, or participants responding inaccurately or falsely to the questions. Response bias occurs when individuals offer self-assessments of particular phenomenon, such as personality traits (Rosenman et al., 2011). Response bias may be due to individuals misunderstanding how to give a proper measurement of the phenomenon in question, or the wording of the question is confusing or unclear for the individual (Schwarz, 1999). A social desirability bias arises with self-report data, when individuals present themselves in a better light (Rosenman et al., 2011). Despite the potential biases associated with self-report data, self-report allows researchers to accumulate participant data efficiently, and are widely used in psychological research (Paulhus & Vazire, 2007).

The correlational nature of the study is an additional limitation. Correlational design prevents causation from being assigned to the study variables. Causal statements cannot be made

about CNA burnout, compassion satisfaction, or personality. Further, this study is cross-sectional, meaning the constructs are measured once at a specific point in time. The constructs measured (e.g., job satisfaction, burnout) may not be stable over time, which therefore limits the generalizability of the study.

Future Research

Research on CNAs remains sparse, especially for CNAs employed in LTC facilities. However, turnover rates for professional caregivers in the United States remains high, is costly, and negatively impacts resident care outcomes (Boushey & Glynn, 2012; Donoghue, 2010; Lerner et al., 2014; Tilden et al., 2012). It is crucial for researchers to continue to focus on CNAs in LTC facilities in order to better support and retain these individuals.

The current study examined personality correlates with burnout and compassion satisfaction. Future researchers could investigate other potential internal factors as correlates with burnout and compassion satisfaction. Such factors might include psychological health (i.e., depression, anxiety), physical health, motivation styles, or perceived levels of control. Understanding the factors that are within or outside of a facility administrator's control may offer insight into CNA burnout and compassion satisfaction.

The current study utilized the ProQOL-5, which includes three separate scales for burnout, compassion satisfaction, and secondary traumatic stress (Stamm, 2010). Only the burnout and compassion satisfaction scales were used for this study. Due to the ongoing nature of the COVID-19 pandemic, CNAs may have experienced the deaths of several residents within their LTC facilities. It may be worthwhile for future researchers to investigate the potential impact of these deaths on CNAs and utilize the secondary traumatic stress scale of the ProQOL-5.

Longitudinal research regarding the levels of burnout and compassion satisfaction of CNAs over the trajectory of their employment may be beneficial. Following any changes in burnout and compassion satisfaction, as well as potentially identifying catalysts for them, may offer insight into factors that prompt a CNA to leave a facility.

Conclusion

Overall, the findings of this study support significant relationships of Big Five personality factors with burnout and compassion satisfaction within a sample of CNAs. This is the first study to examine these relationships within a CNA sample, as these relationships have been previously studied in nursing samples (Barr, 2018; Chen et al., 2018: O'Mahony et al., 2018). Further, there were no significant moderating effects of job satisfaction or work engagement on the aforementioned relationships. However, work engagement was a significant predictor of agreeableness and neuroticism. Job satisfaction was also a significant predictor of extraversion and neuroticism. These results may inform the development of specific interventions based on personality type to best support CNAs in order to reduce levels of burnout, increase compassion satisfaction, and ultimately reduce turnover rates.

The study also revealed pre-COVID-19 and current COVID-19 pandemic differences in burnout and compassion satisfaction. Although burnout levels were higher and compassion satisfaction levels were lower, there were no differences in CNAs' job satisfaction or intent to quit. Further research may investigate secondary traumatic stress levels of CNAs as a result of the pandemic, as well as factors that influenced a CNA's decision to remain employed or quit during the pandemic. Regardless of the specific research questions to be asked, additional research of CNA experiences in LTC facilities is needed to further understand and prevent turnover.

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Table 1

Demographic Characteristics of Participants

Characteristics	Total Participants (N = 100) N (%)
Gender	
Male	18 (18)
Female	78 (78)
Prefer not to Respond	2 (2)
No Response	2 (2)
Race	
Asian	4 (4)
Black/African American	22 (22)
Hispanic American or Latino/a	5 (5)
White/European American	65 (65)
Prefer not to Respond	2 (2)
No Response	2 (2)
Job Title	
Nursing Assistant	28 (28)
Certified Nursing Assistant	11 (11)
State Tested Nurse Aide	57 (57)
Other	2 (2)
No Response	2 (2)
Employment Location	
Long-Term Care Facility	78 (78)
Hospital Setting	17 (17)
Not Reported/Missing	5 (5)
Employment Status	
Full-Time	80 (80)
Part-Time	18 (18)
No Response	2 (2)
Majority of Time Spent Working in Memory Care	
Yes	62 (62)
No	36 (36)
No Response	2 (2)

Table 2

Means and Standard Deviations of Participant Characteristics

Characteristic	Participant Scores *M (SD)*
Age (years)	35.92 (12.14)
Length of Total Employment (years)	10.34 (9.71)
Length of Current Facility Employment (years)	5.97 (8.22)
Percentage of Time Spent Working in Memory Care	48.92 (32.14)

Table 3

Means and Standard Deviations of Study Variables

Scale	Participant Scores *M (SD)*
Professional Quality of Life 5 (ProQOL 5)	
Burnout	23.60 (6.62)
Compassion Satisfaction	41.73 (6.17)
Employee Engagement – X (EE-X)	
Total Engagement	60.18 (9.29)
Big Five Inventory – 2 Short (BFI-2-S)	
Extraversion	21.90 (4.42)
Agreeableness	25.54 (3.73)
Conscientiousness	25.64 (4.00)
Neuroticism	14.17 (4.98)
Openness	22.25 (3.96)
Job Satisfaction	3.40 (1.16)
Intent to Quit	
Frequently Think of Quitting Job	2.59 (1.30)
Seriously Considering Quitting Job	2.26 (1.38)

Table 4

Variable Intercorrelations

	Burnout	Compassion Satisfaction	Extraversion	Agreeableness	Neuroticism	Conscientiousness	Openness	Work Engagement	Job Satisfaction	Intent to quit
Burnout	-									
Compassion Satisfaction	-.74**	-								
Extraversion	-.46**	.42**	-							
Agreeableness	-.53**	.50**	.45**	-						
Neuroticism	.65**	-.50**	-.44**	-.54**	-					
Conscientiousness	-.55*	.50**	.51**	.70**	-.62**	-				
Openness	-.29**	.37**	.44**	.46**	-.23*	.35**	-			
Work Engagement	-.53**	.73**	.27**	.44**	-.39**	.46**	.33**	-		
Job Satisfaction	-.60**	.60**	.12	.24*	-.26**	.24*	.06	.64**	-	
Intent to Quit	-.46**	-.37**	-.07**	-.30**	.27**	-.25*	.07	-.37**	-.47**	-

* $p < .05$
** $p < .01$

Appendix A

Big Five Inventory – 2 Short (BFI-2-S)

This measure is copyrighted by Christopher J. Soto, Ph.D., and Oliver P. John, Ph.D. The BFI-2-S can be found in the following reference:

Soto, C. J., & John, O. P. (2017a). Short and extra-short forms of the Big Five Inventory – 2: The BFI-2-S and BFI-2-XS. *Journal of Research in Personality*, *68*, 69-81.

https://doi.org/10.1016/j.jrp.2017.02.004Get

Appendix B

Professional Quality of Life Scale (ProQOL)

When you help care for people you have direct contact with their lives. As you may have found, your compassion for those you help care for can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a nursing assistant. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days.*

Frequency Scale:

1	2	3	4	5
Never	**Rarely**	**Sometimes**	**Often**	**Very Often**

1. ____ I am happy.
2. ____ I get satisfaction from being able to care for people.
3. ____ I feel connected to others.
4. ____ I feel invigorated after working with those I care for.
5. ____ I am not as productive at work because I am losing sleep over traumatic experiences of a person I care for.
6. ____ I feel trapped by my job as a nursing assistant.
7. ____ I like my work as a nursing assistant.
8. ____ I have beliefs that sustain me.
9. ____ I am pleased with how I am able to keep up with caregiving techniques and protocols.
10. ____ I am the person I always wanted to be.
11. ____ My work makes me feel satisfied.
12. ____ I feel worn out because of my work as a nursing assistant.
13. ____ I have happy thoughts and feelings about those I care for and how I could help them.

1	2	3	4	5
Never	**Rarely**	**Sometimes**	**Often**	**Very Often**

14. ____ I feel overwhelmed because my work load seems endless.

15. ____ I believe I can make a difference through my work.

16. ____ I am proud of what I can do to provide care.

17. ____ I feel “bogged down” by the system.

18. ____ I have thoughts that I am a “success” as a nursing assistant.

19. ____ I am a very caring person.

20. ____ I am happy that I chose to do this work.

Appendix C

Employee Engagement – X (EE-X)

The following questions ask about your thoughts and feelings about how you engage with your work. For each of the statements below, circle the rating that indicates how much you agree with the statement.

Agreement Scale:

1	**2**	**3**	**4**	**5**
Strongly Disagree	Moderately Disagree	Neutral: No opinion	Moderately Agree	Strongly Agree

1. I feel enthusiasm for the work that I do

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

2. I tend to be involved in various areas/projects of my company.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

3. The work that I do is stimulating.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

4. The work that I do is exciting to me.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

5. I tend to take the initiative on new projects/tasks.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

6. I often think about my job outside of work.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

7. I am emotionally invested in my work.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

8. I do my best to ensure the highest quality work outcome possible.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

1	**2**	**3**	**4**	**5**
Strongly Disagree	Moderately Disagree	Neutral: No opinion	Moderately Agree	Strongly Agree

9. I spend a lot of time thinking about the best way to complete a task at work.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

10. I am excited to go to work

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

11. I strive to perfect the outcome of my work.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

12. I pay close attention to the work that I do.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

13. I feel emotionally connected to the success of my company.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

14. When I am at work, I am on task.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

15. It is worth the effort to focus on my work.

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

Appendix D

Job Satisfaction Scale

The following question asks about your overall satisfaction with your job. Please answer the question based on your overall level of satisfaction with your job <u>currently.</u>

How satisfied are you with your job in general?

Not at all Satisfied	Slightly Satisfied	Moderately Satisfied	Very Satisfied	Completely Satisfied
1	2	3	4	5

Appendix E

Intention to Quit Scale

The following questions ask about your thoughts about leaving your current job. For each of the statements below, circle the rating that indicates how much you agree.

1	**2**	**3**	**4**	**5**
Strongly Disagree	Moderately Disagree	Neutral: No opinion	Moderately Agree	Strongly Agree

1. **I frequently think about quitting my current job**

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

2. **I am seriously considering quitting my current job**

Strongly Disagree 1 2 3 4 5 *Strongly Agree*

Appendix F

Demographic and General Information Questionnaire

1. What is your job title?
    a. Nursing Assistant (NA)
    b. Certified Nursing Assistant (CNA)
    c. State Tested Nurse Aide (STNA)
    d. Other: _____
2. What facility are you employed at?
    a. _____
3. What is your employment status?
    a. Full-Time
    b. Part-Time
4. When did you start working as a nursing assistant at your current facility?
    a. Month:_____
    b. Year:_____
5. When did you first begin working as a nursing assistant?
    a. Month:_____
    b. Year:_____
6. Assigned sex at birth:
    a. Male
    b. Female
    c. Prefer not to respond

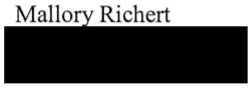
7. Current gender identity:
    a. Male
    b. Female
    c. Transgender male to female
    d. Transgender female to male
    e. Gender non-conforming
    f. Do not identify as female, male, or transgender
    g. Write in: _____
    h. Prefer not to respond
8. What is your race/ethnicity?
    a. American Indian
    b. Asian
    c. Black/African American
    d. Hispanic American or Latino/a
    e. Native Hawaiian or Pacific Islander
    f. White/European American
    g. Write in: _____
    h. Prefer not to respond
9. What is your age?
    a. _____

Appendix G

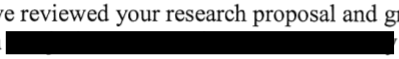
Facility Letters of Approval

October 14, 2019

Mallory Richert



Dear Mallory Richert:

I have reviewed your research proposal and grant permission for you to recruit nursing assistants from  for the purpose of your research, *Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction*

Sincerely,

Administrator of Health Services

[redacted]

October 18, 2019

Mallory Richert
[redacted]

Dear Mallory Richert:

I have reviewed your research proposal and grant permission for you to recruit nursing assistants from [redacted] for the purpose of your research, *Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction.*

Sincerely,

[redacted]
Executive Director

[redacted]

[redacted]

October 17, 2019

Mallory Richert
[redacted]

Dear Mallory Richert:

I have reviewed your research proposal and grant permission for you to recruit nursing assistants from [redacted] for the purpose of your research, *Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction.*

We look forward to providing you with any assistance you might require during your research.

Sincerely,
[redacted]

[redacted]

[redacted]

October 17, 2019

Mallory Richert
[redacted]

Dear Mallory Richert:

I have reviewed your research proposal and grant permission for you to recruit nursing assistants from [redacted] for the purpose of your research, *Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction.*

Sincerely,

[redacted]

Executive Director

[redacted]

[redacted]

08/14/2020

Mallory Richert
[redacted]

Dear Mallory Richert:

I have reviewed your research proposal and grant permission for you to recruit nursing assistants from [redacted] for the purpose of your research, *Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction*.

Sincerely,

[redacted]

[redacted]

October 21, 2019

Mallory Richert
[redacted]

Dear Mallory Richert:

I have reviewed your research proposal and grant permission for you to recruit nursing assistants from [redacted] for the purpose of your research, *Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction*

Sincerely,

[redacted]
Administrator, [redacted]

[redacted]

October 31, 2019

Mallory Richert
[redacted]

Dear Mallory Richert:

I have reviewed your research proposal and grant permission for you to recruit nursing assistants from [redacted] for the purpose of your research, *Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction*

Sincerely,

[redacted]
Administrator- [redacted]

9/16/2020

Mallory Richert
[redacted]

Dear Mallory Richert:

I have reviewed your research proposal and grant permission for you to recruit nursing assistants from [redacted] for the purpose of your research, *Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction*

Sincerely,

[redacted]

Appendix H

Institutional Review Board Approval Letters

January 3, 2020

Mallory Richert
[redacted]

Re: Protocol #19-070, *Caregiver Burnout, Compassion Satisfaction, and Personality: The Moderating Role of Work Engagement and Job Satisfaction*

Dear Ms. Richert:

The IRB has reviewed the materials regarding your study, referenced above, and has determined that it meets the criteria for the Exempt from Review category under Federal Regulation 45CFR46. Your protocol is approved as exempt research, and therefore requires no further oversight by the IRB. We appreciate your thorough treatment of the issues raised and your timely response.

If you wish to modify your study, including the addition of data collection sites, it will be necessary to obtain IRB approval prior to implementing the modification. If any adverse events occur, please notify the IRB immediately.

Please contact our office if you have any questions. We wish you success with your project!

Sincerely,
[redacted]
Chair, Institutional Review Board
Xavier University

MEM/sb

January 22, 2021

Mallory Richert
[redacted]

Re: Protocol #19-070, *Caregiver Burnout, Compassion Satisfaction, and Personality: The Moderating Role of Work Engagement and Job Satisfaction*

Dear Ms. Richert:

The IRB has reviewed the request to modify your study, referenced above. We understand that you will be utilizing Amazon MTurk to recruit participants. We are able to continue to approve your study based on the information you provided. Therefore, your above-referenced study, as modified, continues to be approved in the Exempt category under Federal Guidelines 45CFR46.

Please note that if you wish to further modify your study, it will be necessary to obtain IRB approval prior to implementing the modification. If any adverse events occur, please notify the IRB immediately.

We truly appreciate your efforts and attention to compliance within the spirit of human subject's protection. We wish you great success with your research.

Sincerely,

[redacted]
Chair, Institutional Review Board
Xavier University

TLS/sb

Appendix I

Facility Announcement

Nursing Assistant Burnout, Compassion Satisfaction, and Personality

Description of the Activities: Mallory Richert is a graduate student in the Clinical Psychology program at Xavier University. As a program requirement, all doctoral students are required to complete a research study. Mallory's research study is investigating long-term care nursing assistants' personality and its relationship with burnout and compassion satisfaction. The study is also investigating job satisfaction and engagement and its role with burnout and compassion satisfaction. The study aims to provide information to better help increase satisfaction and decrease burnout for nursing assistants.

To assist Mallory with the research study, you have the opportunity to complete four anonymous questionnaires, which will take about 10 to 20 minutes to complete. Mallory and/or research assistants will be at the facility for an hour before and an hour after shift changes on the following days:

XX
XX

You have the option to complete the anonymous survey either in person, on a paper form, or online by following the link below. To be eligible to complete the survey, you must be 18 years or older, speak and read fluent English, and be a nursing assistant (NA, CNA, or STNA). You can only complete the survey one time. As a thank you for participation, you can enter a drawing to win a $50 Kroger gift card. You will have a 1 in 20 chance of winning the gift card.

Online survey link: xxxxx

If you have any questions or concerns regarding the study, please contact Mallory Richert at richerm@xavier.edu or (402) 480-0216.

Appendix J

Informed Consent Form

Informed Consent Form (Qualtrics & Paper and Pencil Form)

You are being given the opportunity to volunteer to participate in a research study conducted by Mallory Richert, a doctoral study at Xavier University. If you have any questions at any time during the study, you may contact Mallory Richert (richertm@xaiver.edu) or her dissertation chair Dr. Reneé Zucchero (zucchero@xavier.edu). Questions about your rights as a research subject should be directed to Xavier University's Institutional Review Board at (513) 745-2870.

Nature and Purpose of the Project

The purpose of this study is to investigate burnout, compassion satisfaction, personality, job satisfaction, and work engagement of nursing assistants.

Why You Were Invited to Take Part

The study is specifically seeking out nursing assistant participants. You have been invited to participate because you are a nursing assistant or certified nursing assistant.

Study Requirements

Participants must be 18 years of age or older, fluent in English, and a nursing assistant, certified nursing assistant (CNA), or state tested nursing assistant (STNA). Participants will be asked about their experiences as caregivers as well as their thoughts about their work and personal attributes.

Anticipated Risks and Benefits

There is minimal to no risk associated with participation in this study. You are free to discontinue participation at any time with no penalty. Refusal to participate in this study will have no effect on any future services to which you may be entitled at Xavier University or the facility at which you are employed. In addition, you will be given the opportunity to enter a drawing for a $50 Kroger gift card after completion of the study.

Anonymity

Any information you provide will remain completely anonymous; your name will not be recorded on any study materials. The study data will be reported in a summary and no individual answers will be reported in the dissertation document or to your facility. In addition, any demographic information provided will not be used for identification purposes.

By reading this document and completing the questionnaires indicates you have freely given your consent to participate in this study. By completing the following surveys, you

are confirming that you have been given information about this research study and its risk and benefits and have had the opportunity to ask questions and have questions answered. Please do not sign this form. If you would like a copy of the informed consent to keep, please ask the research assistants for a copy when you are finished with the questionnaires.

Informed Consent Form (Qualtrics via MTurk Form)

My name is Mallory Richert and you are being given the opportunity to volunteer to participate in a project conducted through Xavier University. The purpose of this study is to examine personality, burnout, and satisfaction of nursing assistants in long-term care facilities. Participants in this study will be asked to complete an anonymous survey which asks questions regarding your experiences as a nursing assistant. The study should take 10-15 minutes for you to complete. There is minimal to no risk associated with participation in this study. Benefits of this survey include adding to the research regarding nursing assistants to potentially develop interventions to reduce burnout for caregivers.

Nature and Purpose of the Project
The purpose of this study is to investigate burnout, compassion satisfaction, personality, job satisfaction, and work engagement of nursing assistants.

Why You Were Invited to Take Part
The study is specifically seeking out nursing assistant participants. You have been invited to participate because you are a nursing assistant or certified nursing assistant.

Study Requirements
Participants must be 18 years of age or older, fluent in English, and a nursing assistant, certified nursing assistant (CNA), or state tested nursing assistant (STNA). Participants will be asked about their experiences as caregivers as well as their thoughts about their work and personal attributes. Additionally, you must complete every survey item in order to be eligible to receive the $7.00 MTurk compensation as described in the "Compensation" section of this informed consent document.

Anticipated Discomforts/Risks
There is minimal to no risk associated with participation in this study. You are free to discontinue participation at any time with no penalty. Refusal to participate in this study will have no effect on any future services to which you may be entitled at Xavier University or the facility at which you are employed.

Benefits
The benefits of this study include adding to the research regarding nursing assistant burnout. This research may be used to develop interventions to reduce burnout and increase satisfaction for caregivers.

Anonymity
Any information you provide will remain completely anonymous; your name will not be recorded on any study materials. The study data will be reported in a summary and no individual answers will be reported in the dissertation document or to your facility. In addition, any demographic information provided will not be used for identification purposes. Your information will not be used or distributed for future research studies.

Compensation
You will receive a $7 MTurk compensation after completion of the study. You will be provided with a unique code at the end of the survey that you must enter in the MTurk survey posting in order to fully complete the survey and receive the compensation. You will receive the compensation within 3 business days after the completion of the survey.

Refusal to participate in this study will have NO EFFECT ON ANY FUTURE SERVICES you may be entitled to from the University. You are FREE TO WITHDRAW FROM THE STUDY AT ANY TIME WITHOUT PENALTY.

If you have any questions at this time during the study, you may contact Mallory Richert at richertm@xavier.edu or the research supervisor, Dr. Renee Zucchero at zucchero@xavier.edu. Questions about your rights as a research participant should be directed to Xavier University's Institutional Review Board at (513) 745-2870, or irb@xavier.edu.

By reading the above text and selecting the appropriate response below indicates you have freely given your consent to participate in this study. By selecting "I have read the above information and agree to participate in this study" you are confirming that you have been given information about this research study and its risk and benefits. It also confirms that you have been given the researcher's contact information to ask questions regarding the study. If you would like a copy of the above informed consent, please contact the researcher at richertm@xavier.edu

Appendix K

Debriefing Form

Thank you for your participation in this study. Please keep the purpose of this study confidential and do not disclose any information about this study to other potential participants.

The purpose of this study was to investigate relationships between personality, burnout, compassion satisfaction, job satisfaction, and work engagement of nursing assistants. Nursing assistants with certain personality factors are less likely to experience burnout and more likely to experience compassion satisfaction. Work engagement and job satisfaction may impact the relationship between personality and burnout and compassion satisfaction. The researcher seeks to investigate how work engagement and job satisfaction impacts this relationship. This study will expand the existing knowledge about nursing assistants in long-term care, their experiences as caregivers, and individual factors influencing burnout and satisfaction.

Your responses to the questionnaires are, and will remain, anonymous. The only information that will be reported to your facility is the average of all participant scores and not individual scores. The information will be reported to the facility to raise the administration's awareness of burnout and satisfaction with nursing assistants and how to potentially help increase satisfaction in the workplace.

If you have questions or concerns about this study, or if you wish to inquire about the results, you may contact the principle investigator, Mallory Richert, at richertm@xavier.edu, or her dissertation chair, Dr. Reneé Zucchero, at zucchero@xavier.edu.

Summary

Title: Caregiver burnout, compassion satisfaction, and personality: The moderating role of work engagement and job satisfaction

Problem: Although there is a breadth of research available examining burnout and compassion satisfaction of caregivers, research has focused primarily on family caregivers or nurses. There is limited research that examines the experiences of certified nursing assistants (CNAs). Additionally, long-term care (LTC) facilities often experience high turnover rates of nursing staff. With the rapidly growing older adult population in the United States, there will be an increased future demand for care and facility placement. A better understanding of factors impacting CNA burnout and compassion satisfaction is needed to more adequately support CNAs and reduce turnover rates. The present study investigated the relationship among personality correlates, burnout, and compassion satisfaction, as well as the potential moderating impact of work engagement and job satisfaction. Additionally, the present study compared data collected prior to and during the COVID-19 pandemic to determine if there were differences in burnout, compassion satisfaction, job satisfaction, or intent to quit.

Method: Participants (N = 100) were recruited from various LTC and healthcare settings across the United States. CNAs who were eligible to participate (i.e., over the age of 18, employed full- or part-time, fluent in English) were invited to complete a 10 to 20-minute survey. Participants could elect to complete either a paper and pencil or online version of the survey. Participants completed self-report measures of demographics, burnout and compassion satisfaction (ProQOL5; Stamm, 2010), Big Five personality traits (BFI-2-S; Soto & John, 2017), work engagement (Mullins et al., 2015), job satisfaction (Scarpello & Campbell, 1983), and intent to quit.

Findings: There were significant positive relationships d between compassion satisfaction and agreeableness and extraversion, and between burnout and neuroticism. There were significant negative relationships between burnout and agreeableness and extraversion, and between compassion satisfaction and neuroticism. Work engagement and job satisfaction did not significantly moderate these relationships. Participants who completed the study prior to the COVID-19 pandemic reported significantly lower levels of burnout and higher levels of compassion satisfaction compared to participants who completed the study during the pandemic. There were no differences in job satisfaction or intent to quit between the pre-COVID and current COVID participants.

Implications: The results of the present study highlight personality factors as potential susceptibility factors for CNA burnout and compassion satisfaction. Specifically, CNAs who have greater agreeableness and extraversion traits and lower neuroticism traits may be more likely to experience higher compassion satisfaction. CNAs who demonstrate the opposite pattern, lower agreeableness and extraversion traits and higher neuroticism traits, may be more likely to experience higher burnout. Interventions aimed at reducing burnout and turnover of CNAs may benefit by individualizing interventions based on personality. Although work engagement and job satisfaction were not moderating factors for the personality relationships, these factors have previously been found to be associated with burnout and compassion satisfaction and should be further studied in a CNA population. Regardless of personality traits, it is likely that the COVID-19 pandemic created significant challenges for healthcare staff. Differences in burnout and compassion satisfaction, but not in job satisfaction or intent to quit scores, suggest CNAs chose to remain employed for reasons outside of compassion satisfaction or burnout. Further

investigations should examine specific factors influencing CNAs decision to remain employed during times of immense stress and risks.