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# The Correlation Among Personality Characteristics, Stress, and Coping of Caregivers of Individuals with Intellectual and Developmental Disabilities

Natasha O'Connor  
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# Walden University

College of Social and Behavioral Sciences

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Natasha O'Connor

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2015

Abstract

The Correlation Among Personality Characteristics, Stress, and Coping of Caregivers of  
Individuals with Intellectual and Developmental Disabilities

by

Natasha O'Connor

M.A, Adelphi University, 2006

B.A., Adelphi University, 2003

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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## Abstract

There is little research on the coping strategies of direct support professional caregivers working with the intellectually disabled (ID) and developmentally disabled (DD). The study was guided by Lazarus and Folkman's (1984) theory of the transactional model of stress and coping. The purpose of this study was to assess whether there is a correlation among the independent variables of coping and personality characteristics with stress as the dependent variable. A convenience sample of 69 professional caregivers was used. Data were collected using the Ways of Coping Questionnaire, Perceived Stress Scale, NEO-FFI-3, and a demographic questionnaire. A correlational analysis was conducted to assess the variables. Findings revealed a moderate correlation between confrontive coping and stress while the coping styles of distancing, self-controlling, and seeking social support were weakly correlated with stress. Additional results were a strong correlation between neuroticism and stress and a moderate correlation between conscientiousness and stress. Furthermore, a multiple regression analysis was conducted to determine if neuroticism, conscientiousness, and extroversion could predict stress. The analysis indicated that the variance in stress was predicted by neuroticism. Recommendations for future research include using a larger sample size, controlling for selection bias, and examining which coping styles are more useful in coping with stressful situations. A longitudinal design to examine cause and effect is also recommended. This study provides insight into the way professional caregivers cope with stress and the results can be used to develop a screening tool.

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## Dedication

For my mother, who taught me that knowledge is power. Your words have given me strength and pushed me to achieve beyond my expectations. Your sacrifices and strength have made my dreams possible and for that I am forever grateful. For my daughter, Caitlin; I hope to be an inspiration to you. You are my greatest blessing. For my husband, Maxwell; your words of encouragement have given me strength in times when I needed it most and your love has kept me steadfast in the journey. Most importantly, I want to thank the Lord my God for his continuous blessings in my life.

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## Chapter 1: Introduction to the Study

### **Introduction**

Stress and depression are likely to manifest among caregivers because they are faced with the daily demands associated with caring for people with disabilities. Informal or familial caregivers tend to feel loaded down by their caregiving responsibilities (Grabel & Adabbo, 2011). As a result, their physical and psychological health often suffers and they are unable to give their recipients adequate care. Pinquart and Sorensen (2007) reported that caregivers often feel weighted down when unable to complete caregiving tasks, an emotional strain prevalent among all caregiving populations. Stress and burden are common among parents of young adults with intellectual disabilities (Raparano, Bartu, & Lee, 2007); parents of preschoolers with developmental disabilities experience stress and feel overwhelmed and afflicted (Plant & Sanders, 2007). Caregivers of the geriatric population experience burnout from the intense level of care needed by their clients (Cocco, 2010). The responsibility and the intensity of the caregiving tasks may lead to depression (Grabel & Adabbo, 2011; Roth, Perkins, Wadley, Temple, & Haley, 2009). A client's level of dependency on the family caregivers may also contribute to this stress and depression (Gerkenmeyer, Perkins, Scott, & Wu, 2008).

The way individual caregivers cope with this burden may depend, in large part, on personality characteristics, which is the focus of this study. Several studies (Koermer and Kenyon, 2007; Lockenoff, Duberstein, Freidman, & Costa, 2010) reported that family caregivers who tend to display neuroticism, extroversion, and conscientiousness are more likely to exhibit the physical symptoms of caregiver stress and personality characteristics.

Much existing literature has focused on the physical symptoms of stress and depression of parent caregivers, geriatric population caregivers, and professional caregivers (including social workers and nurses). However, empirical studies that measure the relationship between personality characteristics and professional caregiver stress and coping among those who care for the DD/ID population is minimal. This study explored the relationship among personality characteristics, stress, and coping between professional caregivers for this population.

Previous research has focused on family caregivers in relation to stress, depression, personality, and some aspects of professional caregivers (Gabel & Adabbo, 2011; Koermer & Kenyon, 2007; Pinguart & Sorensen, 2007). However, researchers have not focused on the personality characteristics, stress, and coping of professional caregivers of DD/ID individuals. The caregiving population of individuals with DD/ID has been minimally explored (Chapel and Deluja, 2009; Roscoe, Corsentino, Watkins, McCall, and Sanchez-Ramos, 2009; Plant and Sanders, 2007; Qui and Li, 2008). These caregivers are faced with their own difficulties, setbacks, and frustrations as the job itself is taxing. The examination of coping strategies and personality traits among the aforementioned population provide further insight into this group.

### **Background**

Stress and depression can incapacitate individuals in several areas of life (Kilbourn et al., 2011). Some individuals are better able to adapt and handle stress. When individuals are gainfully employed, their professional careers can suffer (Bonde, 2008; Netterstrom et al., 2008). Identifying the personality characteristics associated with stress

and coping and addressing them proactively is important because it can prevent harmful consequences to the individuals that are cared for by the professional caregivers such as risking the health and safety of the care recipient (Macbeth, 2011). Caregivers who are unable to complete their jobs may risk losing their jobs. Therefore, retention within the formal caregiving population is of concern.

Stress may manifest differently with each individual due to coping skills (Goldbasi, Kelleci, & Dogan, 2008; Matthews & Campbell, 2009). Ekwall and Hallberg (2007) reported that the responsibility of caregiving is often associated with negative consequences Caregivers are more at risk for stress because of their level of responsibility to the care recipient (Miodrap & Hodapp, 2010). They are at a higher risk for poorer physical health than same aged peers when residing with the care recipient as compared to caregivers living away from the care recipient (Pinquart & Sorensen, 2007). This was especially true for females who tend to feel more burdened by these responsibilities (Ekwall & Hallberg, 2007) as they tend to assume more of the day-to-day living responsibilities of the care recipient According to Ludecke & Minch (as cited in Grabel & Adobbo, 2011).

Stress also had a negative impact on the caregiver's health. Miodrap and Hodapp (2010) reported an increase in cardiovascular, immune, and gastrointestinal problems in caregivers. Emotional strain and physical health failure also have been apparent in family caregivers (Roth et al., 2009). Stress and depression also have been identified as being fairly common among family caregivers. Depression, anxiety, and behavior difficulties in the care recipient often contribute to the high stress levels (Truzzi et al., 2008).

The personality characteristics of interest in this study were assessed using the NEO-Five Factor Inventory-3, which encapsulates the five common personality traits: openness to experience, agreeableness, extroversion, conscientiousness, and neuroticism (McCrae & Costa, 2010). Each personality characteristic measures a specific set of traits. For example, neuroticism identifies individuals who are susceptible to psychological distress; openness identifies individuals who are open to various experiences. Extroversion identifies individuals who are more positive and cheerful. Agreeableness includes individuals who are helpful, whereas conscientiousness identifies individuals who are dutiful and willing (McCrae & Costa, 2010). These personality characteristics were selected based upon previous research, which revealed that personality traits are universal (Costa & McCrae, 2004).

Research has focused on informal and professional caregivers and the effects of stress and depression among them. However, there has been little research on professional caregivers, especially direct support professional caregivers of the ID/DD and personality characteristics, stress, and coping. Previous research revealed that specific personality characteristics enable individuals to cope with stress better than others (Narumoto et al., 2008). If these direct support professional caregivers are able to cope better with job stress, then the employment in this field may stabilize and thereby decrease the chances of termination. Therefore, a focus on the direct support professional staff and their ability to cope with stress depending on their personality characteristics is of importance to this field.

The direct care staff is the frontline personnel who interact more with the care recipients (Hewitt et. al, 2008). Often these employees have formed meaningful relationships with the care recipients, and both parties develop an attachment to each other (Schuengel, Kef, Damen, & Worm, 2010). In residential settings, family members relinquish their rights to care for their families (Gaugler and Kane, 2007). Therefore, care recipients have come to rely on the direct support professional caregivers to provide for their daily needs and the emotional support they desire (Macbeth, 2011). However, employment in in this population often has been plagued with severe stress due to a high workload (Schuengel, et. al, 2010) and low wages (Hewitt, Larson, Edelstein, Seavey, Hoge, & Morris, 2008), which may lead to termination. The termination of staff within the DD/ID population can damage the emotional attachment of care recipients (Schuengel et al., 2010).

This study examined the correlation among stress, coping, and personality characteristics of direct support professional caregivers. The identification of the personality characteristics of neuroticism, openness to experience, conscientiousness, agreeableness, and extroversion—which are associated with stress and coping—may (a) provide insight to employers about prospective employees, (b) lead to better hiring practices and (c) lead to employees who are vested in their jobs. These changes may improve the care recipients receive.

### **Problem Statement**

According to Hewitt and Larson (2007), the rate of retention among professional caregivers has been approximately 50%. Stearns and D’Arcy (2008) argued that the low

retention rate may be attributed to the job, personal, and demographic characteristics along with wages and benefits. The low percentage of retention is concerning because it can result in poor quality of care for the recipients. For instance, trust is broken when the caregivers resign and relationships have to be forged with a new caregiver resulting in service interruption including little or no recreation and other meaningful activities. There may also be an increase in job stress among the remaining caregivers because they may be expected to work overtime. These conditions ultimately may lead to poor quality of care. Caregivers are faced with several sources of stress including emotional stress (Kim & Schultz, 2008). The caregivers are not always able to cope with the ongoing stress of the job, which may lead to depression (Lin, Probst, & Hsu, 2010). Certain predisposed personality characteristics, such as neuroticism, may aid in coping with stressful situations (Narumoto et al., 2008). The identification of personality characteristics and coping skills may assist in retaining caregivers through the implementation of programs that focus on coping with stress and other forms of supports.

### **Purpose of Study**

The purpose of this quantitative correlational study was to assess whether there is a correlation among stress, coping, and the personality characteristics of direct support professional caregivers for the DD/ID population. The dependent variable was stress, which is defined as:

- (a) a demand (environmental, social, or internal) that requires individuals to readjust their usual behavior patterns, and
- (b) enduring problems that have the potential for arousing threat and involve the perception of threat to one's

wellbeing. Stress can threaten the ability to cope and/or adjust, and individuals may become overwhelmed. (Dilworth-Anderson & Miller, 2004, pp. 159).

The independent variable, personality characteristics, measured extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. The second independent variable, coping style of the professional caregivers, was measured to help determine the relationship between the stress levels and personality characteristics.

The first goal of the study was to examine the extent of the relationship between stress and coping among professional caregivers of individuals with DD/ID. The second goal was to investigate the correlation between personality characteristics and coping. The third goal was to investigate the correlation between personality characteristics and stress. Overall, the aim of the study was to understand how personality characteristics affect stress and coping among professional caregivers of individuals within the DD/ID population. The study adds to the existing research literature on professional caregivers within the DD/ID population. The study was based on the Lazarus and Folkman (1984) model of stress and coping. The research approach focused on the aspects of stress and coping that caregivers employ when faced with a stressful situation. This, in turn, highlighted positive and negative aspects of stress. Furthermore, within this study I considered the aspects of personality characteristics that may predict the retention rate of employees who work with the DD/ID population. Of note is the idea that stress may lead to depression especially for the caregivers within this population (Phillips, Gallagher, Hunt, Der, & Carroll, 2009).

## **Research Questions and Hypotheses**

The following research questions and hypotheses were derived from the review of existing literature in the area of stress, coping, and personality characteristics among caregivers. A more detailed explanation of the questions and hypothesis is provided in Chapter 3.

### **Research Question 1**

What is the correlation between stress and coping among the professional caregiving population of the developmentally disabled/intellectually disabled individuals as measured by the Perceived Stress Scale and the Ways of Coping Questionnaire?

*Null Hypothesis 1:* There is no correlation between stress and coping in caregivers of the developmentally disabled/intellectually disabled population.

*Alternative Hypothesis 1:* There is a high correlation between stress and coping in caregivers of the developmentally disabled/intellectually disabled population.

### **Research Question 2**

What is the correlation between stress and personality characteristics as measured by the NEO-Five Factor Personality Inventory-3?

*Null Hypothesis 2:* There are no personality characteristics that are associated with increased levels of stress.

*Alternative Hypothesis 2:* Certain personality characteristics such as neuroticism, extroversion, and conscientiousness result in high stress levels.

### **Research Question 3**

What is the correlation between coping and personality characteristics among the professional caregiving population of the developmentally disabled/intellectually disabled individuals as measured by the NEO Five Factor Personality Inventory-3 and the Ways of Coping Questionnaire?

*Null Hypothesis 3:* Caregivers with agreeableness and openness to experience will not have utilized better coping skills.

*Alternative Hypothesis 3:* Caregivers with the personality characteristics agreeableness and openness to experience will utilize better coping skills.

### **Theoretical Framework**

According to Lazarus & Folkman (1984), stress is characterized as an individual's understanding of external demands on his or her resources, values, and goals. In studying the relationship between stress and coping of professional caregivers of the DD/ID population, the transactional model of stress and coping was used. This model assesses coping styles in stressful situations. The individual assesses the problem's threatening nature at the primary appraisal stage after which the problem is analyzed and the individual's coping mechanisms in relation to the problem are evaluated at the secondary appraisal stage. The final stage is the coping effects. . The examination of the research questions using the transaction model of stress and coping will be a filter to understanding the research in this area. Grabel and Adabbo (2011) reported that the transactional model of stress and coping can explain the relationship between caregivers stress and their coping behaviors. For instance, caregivers are faced with stress on a daily

basis during caregiving situations. Difficulty coping with stress may lead to depression (Lin et al., 2010). Caregivers of individuals with DD/ID are faced with an overwhelming number of tasks on a daily basis, which require the careful attention (Miodrap & Hodapp, 2010). The number of tasks can result in extreme stress (Truzzi et al., 2008). The stress can affect the quality of the caregiver's work that the care recipient receives (Macbeth, 2011). Research has indicated that caregivers tend to employ poor coping strategies when faced with stressful situations in their caregiving role (Barbosa, Figuerredo, Sousa, & Damien, 2011). They may be indicative of the caregiver's personality. Narumoto et al. (2008) reported that certain personality characteristics predispose an individual to cope better with stressful situations. Difficulty coping with the situation may cause caregivers who are more stressed and depressed to leave the source of stress, which is their paid employment.

A more detailed explanation of the goals of the study are presented in Chapter 2.

### **Nature of the Study**

The study examined whether a correlation exists between stress and coping among professional caregivers (direct support professional) of individuals in the DD/ID population. The dependent variable was stress. The independent variables were coping and personality characteristics namely extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. Tools used were the Perceived Stress Scale, a 14-item questionnaire that measures perception of stress (Cohen, Kamarck, & Mermelstein, 1983), and the Ways of Coping Questionnaire, a 55-item scale that assesses how often an individual engages in coping strategies with daily

encounters (Folkman & Lazarus, 1988). The Ways of Coping Questionnaire measures eight factors of coping including confronting, distancing, self-controlling, seeking self-support, accepting responsibility, escape-avoidance, planful problem solving, and positive reappraisal coping. The NEO-Five Factor Inventory-3 (NEO-FFI-3) consists of 60 items that measure the five basic facets of personality (McCrae & Costa, 2004). A demographic questionnaire was also used.

The study used a correlational design to investigate the relationship between stress, coping, and personality characteristics. The data were collected in eight 24-hour residential facilities that house individuals with developmental disabilities/intellectual disabilities. The target audience was professional residential caregivers of individuals with DD/ID.

Data were analyzed using the multiple linear regression model. A multiple linear regression model is often used for predictive purposes as well as to explain the constructs investigated (Myers, Glenn, & Guarino, 2012). According to Aiken, West, and Pitts (2003), a multiple linear regression examines the relationship between one dependent variable and a number of independent variables; the regression analysis is often used to assess the cause effect relationship between the independent and dependent variables (Uyanik & Guler, 2013). The multiple linear regression was selected as the statistical test because there was more than one independent variable (coping and personality characteristics, i.e., neuroticism, agreeableness, extraversion, conscientiousness, and openness to experience) and only one dependent variable (stress). I was interested in measuring the relationship between stress and coping among the professional caregiving

population of the ID/DD population and the relationship between stress and personality characteristics as measured by the NEO-FFI-3, Ways of Coping Questionnaire, and the Perceived Stress Scale.

### **Definitions**

This section gives operational definitions for terms used throughout the dissertation.

*Stress*: Relationship between individual's resources, values, and goal and interpretation of external and internal demands and “ (a) a demand (environmental, social, or internal) that requires individuals to readjust their usual behavior patterns and (b) enduring problems that have the potential for arousing threat and involve the perception of threat to one's wellbeing. Stress can threaten the ability to cope and/or adjust, and individuals may become overwhelmed” (Dilworth-Anderson & Williams, 2004, p. 159).

*Personality*: Individual differences in characteristic patterns in thinking and behaving (American Psychological Association, 2012).

*Coping*: Efforts to prevent or diminish threat, harm, and loss, or to reduce associated distress (Carver & Connor-Smith, 2010).

*Direct service workers (DSWs)*: Individuals who receive monetary compensation to provide support to individuals with a wide range of health and human service needs. “These caregivers provide support and assist individuals with a wide range of daily living activities including such things as home maintenance, healthcare coordination, social activities with friends, employment, healthcare and physical care, skill development, and

facilitate connections to people, resources, and experiences necessary for individuals and their families to live a full and safe life. (Hewitt et. al., 2008, p. 4).

*Direct support professionals (DSP)*: In this study refers to caregivers employed in the residential setting/group home, which cares for individuals with developmental disabilities and intellectual disabilities.

*NEO-FFI-3: NEO-Five Factor Inventory-3*: NEO FFI-3 is a short and simple version of the NEO Personality Inventory (NEO-PI-R) developed by Costa and McCrae in 2004.

*Perceived Stress Scale-10 (PSS-10)*: The Perceived Stress Scale-10 (PSS-10) is a 10 item self-report questionnaire that examines the individual's perspective of managing stress and stressful situations within the past month.

*Ways of Coping Questionnaire (WAYS)*: The Ways of Coping Questionnaire (WAYS) is a 66 item self-report questionnaire that assesses the coping style of the individual when faced with a stressful situation

### **Assumptions**

Due to the design of the study, survey instruments and self-reports were determined to be the best way to gain an understanding of the caregivers' perceptions of the variables. It was assumed that:

- That the participants were truthful when completing the surveys and did so with thought and evaluation
- The participants would be willing and unbiased
- The caregivers were honest and transparent.

- The participants possessed the educational level needed to understand the questions asked in the survey instruments.
- That the instruments used in the study, the Perceived Stress Scale, the Ways of Coping Questionnaire, and the NEO-FFI-3 inventory were appropriate tools to measure the designated variables.
- Stress and depression would not affect the participants' willingness to participate in the study.
- Coping style was homogenous among the study participants.
- The study was not biased in selecting participants and those who suffer from depression and poor coping skills would not have been excluded due to their inability to complete the task.

To address the possibility of social desirability skewing results, I informed the study participants that the results of the study are confidential. Additionally, the names of the study participants were not used when reporting the data in order to protect confidentiality. Furthermore, it was hoped that the informed consent and assurance of anonymity would lessen any fear of negative consequences and thereby lessen concerns about social desirability.

### **Scope and Delimitations**

Stress, personality characteristics, and coping are key variables for caregivers of the DD/ID population. Understanding the correlation between the variables provided additional research into the problem within the target population. Given the high turnover rate among caregivers of the identified population, it is important to understand how

these variables play a key role in the issue of the retention. It is also important to understand how to provide a stable environment to the care recipients, which may enhance their quality of life thereby stabilizing the workforce within this caregiving population.

The key population of the study was the adult professional caregivers of the individuals with DD/ID. There has been limited research in this area, thus the results of the research has contributed to the existing literature in the area of study. The data collected was restricted to survey instruments namely the NEO-FFI-3, Ways of Coping Questionnaire, and Perceived Stress Scale. The target population was restricted to eight 24-hour residential facilities/group homes where individuals with developmental disability/intellectual disability reside. The targeted study population included 69 participants. The targeted sample population is small but a calculation using the G\*power analysis software determined that a minimum sample size of 55 would be adequate to provide meaningful findings. However, it was my goal to obtain more participants thereby enabling a larger sample size and better data. However, since the sample was limited to one organization generalization to the entire population of professional DD/ID caregivers was limited.

### **Limitations**

The design was correlational and it was difficult to predict the direction of the relationship between variables, thereby impacting internal validity. There is also a risk of central tendency bias through the use of the Likert scales. Another limitation is the use of a convenience sample for the study in one organization. Of consideration is the

truthfulness of the participants. A fourth scale was considered to address the social desirability and truthfulness of the participants but the inclusion would have resulted in test fatigue which may have ultimately compromise the results of the study as the participants were already asked to complete three scales. I planned to assist the participants in filling out the survey instruments as accurately as possible by reading the items to the participants. However, all participants opted to complete the survey on their own.

### **Significance**

The correlation between stress and coping is of concern for caregivers who are formally employed within the DD/ID population. Of significance are high turnover rates, which ultimately affect the level of care that the recipients receive. For instance, a high turnover rate could damage relationships between staff and clients; a relationship develops after working with the clients for some time and termination or willingness to leave results in a failed relationship thereby placing the clients in a situation where they have to foster a relationship with another caregiver. This may result in the lack of trust between clients and caregiver because the client is unaware of whether the caregiver will be employed on a long-term basis.

This study adds to the existing literature on professional caregivers of DD/ID population that addresses the relationship between stress, coping, and personality characteristics. It also provides employers with insight about prospective employees and with the opportunity to screen prospective employees, thereby changing the hiring process. The quality of employees can be improved and the employed population will be

stabilized. Overall, administrators will have a better understanding of the retention issue by understanding the reasons why caregivers leave. The social change implications of the study are the knowledge gained that can be used to foster a relationship of long term employment within the target population.

### **Summary**

The review of the literature revealed a relationship between stress and coping among family caregivers. Stress can affect each person differently which impacts their ability to cope (Grabel & Adobbo, 2011; Pinguart & Sorensen, 2007; Raparano, Baratu, & Lee, 2007). The relationship between stress and coping among family caregivers were extensively studied. However, there is a gap in the research on professional caregivers and stress, coping, and personality characteristics. If a relationship exists between these variables we may gain further understanding of the how to effectively manage stress which will provide further insight into retention issue that is affecting the human service industry. I examined whether there is a correlation between stress, coping, and personality characteristics of the professional caregivers of the DD/ID individuals

Chapter 2 provides a review of research that addressed stress, coping, depression, personality characteristics, and types of caregiving stress and coping, professional and residential caregivers, as well as Lazarus & Folkman's (1984) model of stress and coping. Chapter 3 provides an overview of the research design and rationale for the study. The population, sampling procedures, recruitment issues, data collection, and the survey instruments are explored. Chapter 4 presents the results related to each research question. Chapter 5 provides a discussion and interpretation of the findings, results,

recommendations for action and further study, limitations of study, and implications for social change.

## Chapter 2: Literature Review

### **Introduction**

The purpose of this quantitative correlational study was to assess whether there is a correlation among stress, coping, and the personality characteristics of direct support professional caregivers for the DD/ID population. The purpose of this chapter was to examine the existing literature on stress, coping, and personality characteristics as it relates to the research questions. This chapter covers the following topics: (a) literature search strategy; (b) theoretical foundation; (c) literature review (d) summary.

The retention rate of 50% among professional direct support caregivers for the intellectually disabled/developmentally disabled population has been a persistent issue (Hewitt & Larson, 2007). Caregivers and care recipients form a bond when working closely together, and termination of employees may result in broken bonds and relationships, which can be damaging to the care recipients (Schuengel et al., 2010). Furthermore, care recipients rely on the caregivers to provide for their daily needs such as completing activities of daily living, being escorted to appointments and medical appointments, and general recreational activities (Scheuengel et al., 2010) and the sudden loss of the caregiver may have detrimental effects on the care recipients (Macbeth, 2011). More specifically, the rapid turnover of caregivers results in poor care for the care recipients because there is less staff to provide for the individuals' needs. The increased workload among the remaining caregivers also leads to increased stress levels and may result in voluntary termination thereby decreasing the rates of retention among the caregiving population.

The retention of staff is essential to any organization's success, so it is paramount that reasons for low retention rates be identified. The low retention rate among caregivers can be attributed to the job characteristics, personal characteristics, demographic characteristics, wages, and benefits (Stearns & D'Arcy, 2008; Gray-Stanley et al., 2010; Grabel & Adabbo, 2011). For example, Stearns and D'Arcy (2008) reported that the facility characteristics including supervisor qualities, benefits, and training/safety affect the low retention of staff. Furthermore, according to Gray-Stanley et al. (2010), caregivers often are faced with high caseloads and workloads, which in turn increases stress levels, which then often result in poor coping strategies (Grabel & Adabbo, 2011), which results in voluntary or mandatory termination. The high stress levels can also lead to depression among the caregivers (Lin et al., 2010). The way an individual copes with the current situation may alleviate some of the stress; however, an individual may be predisposed to stress based on personality characteristics (Richter, Lauritz, du Preez, Cassimjee, & Ghazinour, 2013). Other personal characteristics that affect retention include education and income levels. The identification of characteristics that predispose workers to stress will assist employers in retaining quality workers, which will assist in stabilizing the workforce and provide a better level of care to the care recipients.

Extant literature has explored the role of stress among family and professional caregivers. However, there is little research on stress and coping among direct support caregivers within the DD/ID population. Personality characteristics among the caregivers of the DD/ID population have seldom been explored. The identification of the personality

characteristics among the said population and the correlation between stress and coping will assist in the larger issue of retention among this population.

The key elements within this chapter include the literature search strategy, theoretical foundation, literature review, and summary of the relevant research. More specifically, this chapter focuses on the review of the existing literature on caregivers, stress, coping, and the theoretical orientation. Because of the paucity of research on stress and coping among DSPs within the DD/ID population, this literature review necessarily reviews literature outside of that narrow population in order to identify key variables for exploration within the context of the this study. The overview of the theoretical foundation contains an explanation of the work on which the study is based. This review of the literature captures the breadth of research on caregiving, stress, and coping as well as demonstrates the gap in research on stress and coping among direct support caregivers within the DD/ID population

### **Literature Search Strategy**

The literature search for this study covered the past 7 years and used the following databases: Ebscohost - PsycINFO, PsycARTICLES, Academic Search Premier/Complete, Medline, Science Direct, CINAHL, Pro Quest CentralScienceDirect, and Google Scholar. The following keywords were used: *stress, stress and depression, stress or depression, personality and professional caregivers, nurse or healthcare worker, respite and developmental disabilit\*, coping, personality characteristics, direct care workers, family caregiver, caregivers, NEO-FFI and personality, Perceived Stress Scale, Ways of Coping Questionnaire, stress and coping model, and professional*

*caregivers, caregiver burden, occupational stress, health care workers and developmental disabilities.* I scanned the reference lists of significant articles for additional sources. , and books such as *Research Methods and Statistics in Psychology, Handbook of Psychology, Ethical Principles of Psychologists and Code of Conduct, Research design: Qualitative, Quantitative, and Mixed Methods Approaches, Survey Nonresponse, Encyclopedia of Health and Behavior , Encyclopedia of Statistics in Behavioral Science, Manual for the Ways of Coping Questionnaire, Handbook of personality: Theory and research ( 3<sup>rd</sup> ed), Stress, Appraisal, and Coping, Perspectives in Interactional Psychology, Fifty years of research and theory by R. S. Lazarus: An analysis of historical and potential issues, Professional manual for the NEO Inventories: NEO-PI-3, NEO-PI-R, and NEO-FFI-3, Applied multivariate research, design and Interpretation (2<sup>nd</sup> ed.). .*

Literature reviewed included peer-reviewed journals and materials from professional website such as the National Direct Workforce Resource Center: [www.disability.gov](http://www.disability.gov); [www.medicaid.gov](http://www.medicaid.gov). In cases where there were a small number of recent studies, older materials were included. Furthermore, international studies were explored due to the limited research in the United States on specific caregiving population.

### **Theoretical Foundation**

This section focuses on overview of the transactional model of stress and coping and a review of the literature of the current theory as it applies to this study. Stress is characterized as an individual's understanding of the external demands on the

individual's resources, values, and goals (Lazarus & Folkman, 1984). This study was guided by Lazarus and Folkman's (1984) theory of the transactional model of stress and coping. Often caregivers are faced with many stressors, which is a direct result of caring for others, and Grabel and Adabbo (2011) reported that the transactional model of stress and coping can explain the relationship between caregivers' stress and their coping behaviors. The model consists of primary and secondary appraisal stages as well as coping stages, and the transactional model assesses coping styles. According to the model, the problem threatening nature is analyzed at the primary appraisal stage, and the evaluation of the individual's coping mechanisms is appraised at the secondary appraisal stage. During the coping stage, the strategies for both the primary and secondary appraisal stages are reviewed and an outcome is provided.

The demands faced by the caregivers in the caregiving situation either allow for the caregiver to implement a coping strategy to handle the situation or avoid the issue altogether. However, according to Lazarus and Folkman (1984), some caregivers do not employ any coping strategies which may lead to depression and stress. However, others with certain personality characteristics are able to employ coping strategies and do not experience the feelings of depression and stress. Some caregivers experiencing significant stress may respond to their situation by terminating their employment. In the recent research, it has been assumed that individuals with the specific personality characteristics of neuroticism, extroversion, and conscientiousness will be less likely to cope with the stressful situations than their peers whose personality characteristics related to agreeableness and openness to experience.

Lazarus and Folkman's (1984) transactional model of stress and coping has been widely used in different areas of research. Goh, Sawang, and Oei (2010) conducted a review of the model and extended it to include stages between secondary appraisal and coping and attempted to develop a revised transactional model of stress and coping. The Goh et al. study included 129 full-time workers, and measures included the primary and secondary appraisal scale by Dewe (1991), the Ways of Coping Checklist Revised, and the Occupational Stress Inventory. A path analysis was completed on the original transactional model of stress and coping and the Revised Transactional Model (RTMI) and the Revised Transactional Model 2 (RTM2). The results of the study indicated that stressors are managed by the individual's coping strategies; thus supporting Lazarus and Folkman's (1984) theory. Although the RTM2 was found to appropriately represent the initial model as it included the Primary Appraisal, Secondary Appraisal, Time 1 Coping Behaviors, and Time 2, the original model, as formulated by Lazarus and Folkman, was found to be the best theory for understanding the relationship between stress and coping.

In a similar study, Grabel and Adabbo (2011) used Lazarus and Folkman's (1984) transactional model to assist in the understanding of stress and burden among German caregivers. The researchers examined perceived burden and its relationship with the negative aspect of caregiving. Perceived burden refers to the adjustment to the new caregiving situation, which can either be viewed as positive or negative (Grabel & Adabbo, 2011). Grabel and Adabbo called this the balance model, and within the model the caregivers' rated burden was either subjective or objective, which assisted understanding their handling of stress in the caregiving situation. In certain aspects of the

caregiving role, caregivers experience burden due to the new caregiving situation, which occurs because caregivers are forced into the caregiving role.

Grabel and Adabbo (2011) developed the Burden Scale for Family to measure the burden because none of the existing scales had been validated in Germany. The balance model contains three components that explain the impact of the caregiving situation on the caregivers. First, caregivers are more burdened by the severity of illness amongst the care recipients. For instance, the more ill the care recipients are then the caregiving role will be more burdensome. Second, caregivers may have negative attitudes towards the caregiving situation if they themselves are ill or have a diagnosable condition. Third, lack emotional support contributes to the burden of caregiving. Overall, all caregivers feel some sense of burden from the caregiver situation but the presence of these three components contributes to the sense of a great burden of the caregiving situation and homecare role.

The transactional model of stress and coping also has been used to assess interpersonal relationships, stress generation, and depressive symptoms (Eberhart & Hammen, 2010). Eberhart and Hammen (2010) used a diathesis-stress model to assess the stress states in interpersonal relationships. The participants were 104 undergraduate women who were romantically involved and in contact with their partner on a daily basis. A diagnostic interview was initially completed that addressed depressive symptomology and interpersonal styles, which was used as the baseline. The participants were assessed using the Structured Clinical Interview for DSM-IV Axis I Disorders, Clinician Version, Beck Depression Inventory, Experiences in Close Relationships- Revised, 3 Vector

Dependency Interview, and the Excessive Reassurance Seeking Scale. Participants also completed a daily diary and a Romantic Life Stress Interview. Eberhart and Hammen found that romantic conflict stress was mediated by anxious attachment and reassurance seeking on depressive symptoms. Anxious, avoidant attachment, and reassurance seeking and love dependency behaviors were mediated by daily conflict stress, thus supporting previous findings that interpersonal vulnerabilities were associated with depression. Furthermore, an individual's interpersonal behaviors namely anxious attachment, avoidant attachment, reassurance seeking, and love dependency behavior were found to contribute to depressive symptomology. Although the population studied was not caregivers, the results indicated that individuals' experiences in various relationships may be similar to that of caregivers when faced with a stressful situation.

The transactional model of stress and coping has also served as a foundation to explore stress and coping among children and caregivers within the African American population (Gold, Treadwell, Weissman, & Vichinsky, 2008). Gold et al, (2008) used the transactional model of stress and coping to understand how siblings of chronically ill individuals cope. The participants included 97 siblings and the parents of these chronically ill children. The results indicated that overall family function was related to family coping and sibling avoidant coping strategies. This was also associated with internalizing and externalizing behavior problems. Positive sibling adjustment was associated with family coping, support and expressiveness, and low family conflict. This study contributes to explanation of how different siblings cope with stress.

Stress and coping are experienced by individuals in daily life. However, caregivers tend to utilize similar coping strategies when faced with stressful situations. Fitzel and Pakehman (2009) explored stress and coping strategies used by caregivers of cancer patients through a longitudinal study with the caregivers and care recipients. A questionnaire was used to measure appraisal and the social support questionnaire, Brief Cope, Bradburn affect balance scale, Positive States of Mind, Life Balance scale and the Symptom Checklist depression and anxiety scales also were used. The results indicated that higher social support, lower stress, and higher challenge appraisals were associated with better caregiver adjustment. Caregivers who perceived they had better control of the caregiving situation were healthier. The caregivers had more positive states of mind and lower distress when less avoidant coping strategies were used. That is, if they faced the caregiving difficulties rather than avoid the situation, they were more mentally healthy.

In identifying the theoretical perspective for studying the stress, coping, and personality characteristics, the transactional model of stress and coping, proves as an exemplar model. This theory focuses on the identification of the stressors and the identified coping strategies (Lazarus and Folkman, 1984). The transactional model of stress and coping has been widely applied to a multitude of different research to investigate interpersonal relationships, stress, depressive symptoms (Eberhart & Hammen, 2010), in the development of a revised model for stress and coping (Goh et al., 2010), stressors experienced by caregivers (Grabel & Adabbo, 2011; Gold et al, 2008).

In applying the theory to the dissertation research, the effects of stress, coping, and personality characteristics among the DSPs of the DD/ID population was

investigated. It was hypothesized that caregivers within the DD/ID population would (a) have high stress levels (b) have certain personality characteristics including agreeableness and openness to experience that would enable them to cope with stress (c) have coping skills and be able to cope with stress in a highly stressful environment.

### **Literature Review**

This section consists of four subsections that review the research literature into (a) the phenomenon of caregiving; (b) caregiver personality traits; (c) the nature of stress among caregivers, including in-depth examination of how stress is manifested among family caregivers, professional caregivers, residential caregivers, and men and women; and (d) how caregivers cope with the stress of caregiving. Because of the limited amount of research available on stress and coping among DSPs of the DD/ID population, studies that investigated stress and coping among other populations were included as part of the literature review.

### **Caregiving**

In order understand the depth and function of the caregiver, a description of caregiving and a review of the literature on caregiving is required. In this study, the term “direct care worker” is interchangeable with caregiver. According to the PHI and Direct Care Workers Association of North Carolina (2009), a direct-care worker is an individual who provides daily living supports and long term care to individual with intellectual and disabilities, older persons, people with physical disabilities, and people with chronic care needs. Direct service workers provide for personal care, hygiene, health and safety, health related medication, transportation, employment supports, and behavioral plans and

monitoring. The caregiver is responsible for providing assistance to the care recipient for ambulation for toileting needs, wound care, providing surveillance to care recipients, and attending to wandering behaviors (Arber & Venn, 2011). Finally, direct service workers are responsible for implementing recreational activities, conducting assessments, teaching new independent living skills, and assisting in home skills (Hewitt et al., 2008).

Research indicates that broad generalizations about caregiving and caregivers cannot be made because caregiving roles vary with population, and the sense of familism affects the depression and support received by caregivers in various caregiving populations (Chun, Knight, & Young, 2007). Although most of the research reviewed was focused on family caregiving, this research study is solely focused on the professional caregivers of individuals with DD/ID. Research has identified variables affected by the caregiving situation and these variables are discussed in this chapter. However, the target population for the study has not been well researched in the area of stress, coping, and personality characteristics. The exploration of variables already identified by the extant literature to the target population contributed to the research by providing data that can be used to develop more generalized understandings of the relationship between stress, coping, and personality traits.

### **NEO -Five Factor Inventory-3 (NEO-FFI-3)**

Personality is a well-researched area (John, Robbins, & Pervin, 2008, McCrae & Costa, 2010; Lockenhoff et al., 2011). McCrae and Costa (1989) developed a five factor model to describe common personality traits. These traits are neuroticism, extraversion, openness, agreeableness, and conscientiousness. Neuroticism was defined by Costa and

McCrae (1992) as a dimension of maladjustment or negative emotionality versus adjustment and emotional stability. Neuroticism is often referred to as a negative emotion and these individuals tend to experience “negative effects such as fear, sadness, embarrassment, fear, guilt, and disgust (McCrae & Costa, 2010, p. 19). Individuals with high scores on this facet are more susceptible to psychological distress and have difficulty controlling their impulses, have difficulty coping to stress and tend to have irrational ideas (McCrae & Costa, 2010). Ormel et al. (2013) reported that neuroticism can be used as an identifier for the evolving psychopathology.

The second facet, extraversion measures warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions. Extroverts are social, assertive, active, talkative, like excitement, tend to be upbeat, and cheerful (McCrae & Costa, 2010). These individuals are generally positive.

The third facet, openness to experience, is marked by “an active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, intellectual curiosity, and independence to judgment (Costa & McCrae, 2010, p. 20). These individuals are willing to accept unconventional ideas and are curious about the world around them. These individuals experience both positive and negative emotions (McCrae & Costa, 2010). The openness to experience facet measures fantasy, aesthetics, feelings, actions, ideas, and values (McCrae & Costa, 2010).

The fourth facet, agreeableness, refers to trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness (McCrae & Costa, 2010). According to McCrae & Costa (2010), agreeable individuals are altruistic, helpful, and believe that

others are as helpful as they. They see the best in others. On the other hand, a disagreeable person is uncooperative, egocentric, and competitive (Rothmann & Coetzner, 2003).

The fifth facet, conscientiousness, describes the differences in motivation and persistence and measure competence, order, dutifulness, achievement striving, self-discipline, and deliberation (McCrae & Costa, 2010). A conscientious individual is “purposeful, strong willed, determined” (McCrae & Costa, 2010, p. 20).

Personality traits are universal (McCrae & Costa (2004). Jian-Feng (2010) reported that Chinese and American individuals have similar personality types. Chinese individuals presented with higher levels of neuroticism and lower levels of conscientiousness, agreeableness, and extroversion. Mexican individuals share the same personality characteristics as Americans including neuroticism, conscientiousness, agreeableness, and extroversion. However, they tend to be less assertive and closed to new experiences. Although they share the same personality characteristics, culture determines the degree of variance when compared to the American sample (Ortiz et al., 2007). French Filipino (McCrae, Costa, del Pilar, Rolland, & Parker, 1998), and Polish and Finnish cultures (Paunonen, Jackson, Trzebinski, & Forsterling, 1992) share the same personality characteristics as Americans. Furthermore, when personality traits were compared among American, Chinese, and the Greek cultures, the results indicated that the specific five factor personality traits were evident in the various cultures (Nye, Roberts, Saucier, & Zhou, 2008). The NEO FFI-3 is often used the measure personality

traits. A more detailed description of this scale and its characteristics can be found in Chapter 3.

### **Caregiver Personality Traits**

This section focuses on the personality characteristics that explored in this research. The research in the area of caregivers and personality characteristics is limited. Therefore, only a limited number of studies are available. Personality traits affect how one can cope with everyday stressors. The level of stress may affect the caregiver's health both mentally and physically (Lockenhoff et al., 2011). Lockenhoff et al. (2011) measured self-efficacy and caregiver strain among informal caregivers to determine whether physical health correlated with personality traits in a cross sectional design. The NEO Personality Inventory-Revised measured personality traits, the Pearlin et al. (1990) measurement model measured caregiver strain, and the Medicaid Health of Seniors Survey and the Medicare OASIS survey were used to measure self-efficacy and the care recipients' mental impairment. Personality characteristics appeared to affect caregivers' mental and physical health. Particularly, physical and mental health was negatively associated with neuroticism and positively associated with extroversion. On the other hand, conscientiousness and openness were linked to subjective mental and physical health. Caregivers with a high sense of self-efficacy had better subjective and physical health indicating that the caregivers' strong beliefs influenced their health. Self-efficacy mediated the effects of strain on personality characteristics namely neuroticism and agreeableness.

Personality traits have been found to affect the caregivers' well-being and life. Lockenhoff et al. (2011) found that caregivers' health was influenced by relationship strain and personality characteristics. The study population included caregivers of older adults with physical disabilities. Caregivers' subjective physical and mental health was measured by the SF-36 Health Survey, and caregiver strain was measured using the Pearlin et al. measurement model of caregiver strain process. Lockenhoff et al. used a Likert scale based on Rodin and McAvey (1992) to measure multidomain self-efficacy. The care recipients' physical impairments were measured using the Medicare Health of Seniors Survey and the Mini Mental State Examination was used to measure care recipients cognitive abilities. Lockenhoff et al. used the NEO Personality Inventory Revised (NEO-PI-R) to assess caregivers' personality traits. The results indicated that caregivers' subjective mental and physical health was associated with agreeableness and openness. Furthermore, Lockenhoff et al. found that caregivers' physical and mental health was associated positively with conscientiousness and extroversion and negatively affected by neuroticism. On the other hand, self-efficacy and caregiver strain moderated the effects of the subjective health and personality traits of caregivers. The Lockenhoff et al. study assessed a large sample of caregivers, addressed the moderating variables, and assessed the correlation between health and personality characteristics; however, stress and coping as related to personality was not explored.

Personality traits or variables tend to affect the caregiving situation differently. For instance, the physical symptoms and caregivers stress was shown to be associated with neuroticism, extraversion, and conscientiousness (Koermer & Kenyon,

2007). Koermer and Kenyon (2007) measured stressors and caregivers' abilities to cope. The identified stressors included caregiving tasks, family disagreements regarding care, and care recipients behavior problems. Depressive levels were measured and gender and personality was investigated as moderating variables. The researchers used a modified version of the Hopkins Symptoms Checklist to measure depressive symptoms, the Zarit Burden scale burden to measure burden, the Midlife Developmental Interview to measure the personality characteristics and the Revised Behavior and Memory Checklist to measure care recipient's behaviors. Perez Algorta et al. (2014) evaluated the personality of the mothers of children with ADHD and parental stress. A comparison group of mothers with children without ADHD was also evaluated. The NEO-Five Factor Inventory, the Connor's Adult ADHD Rating Scale (CAARS), and the PSI-short form were used. The results indicated that mothers with children with ADHD reported higher levels of stress. These mothers also scored higher on neuroticism and lower on conscientiousness and agreeableness when compared to the control group.

The results indicated that caregivers experienced physical health symptoms, burden, and mood fluctuation on a daily basis which were found to be influenced by the number of caregiving tasks, family disagreements, and care recipients' behaviors. It appears that the female caregivers had more difficulty managing the caregiving tasks and as a result experienced more mood fluctuations and decline in physical health. Furthermore, neurotic and conscientious caregivers were inclined to experience daily mood fluctuations whereas caregivers with high scores on extroversion were less likely to experience depressive symptoms. Although the research focused on a narrow caregiving

population with a limited sample size, and personality characteristics were only investigated once during the research period, the study demonstrated the need for additional resources to be available to caregivers.

Personality traits also tend to profoundly influence caregivers' ability to complete their required tasks without experiencing burnout. Narumoto et al., (2008) examined personality styles and coping strategies using the Maslach Burnout Inventory (MBI) and the NEO Five-Factor Inventory (NEO-FFI) to measure burnout and personality traits. The results indicated high rates of burnout among professional caregivers of the elderly and even higher rates among the caregivers of individuals with mental retardation. Significantly, higher burnout rates positively correlated with higher neuroticism and higher emotion-oriented coping.

Negative affectivity and social inhibition have been identified as characteristics of the Type D personality (Polman, Borkoles, & Nicholls (2010). Polman et al. (2010) examined the relationship between stress, burnout, and the Type D personality. The Type D 14 scale (DS14), the Brief Approach/Avoidance Questionnaire, Perceived Stress Scale, Multidimensional Scale of Perceived Social Support, and the Oldenburg Burnout Inventory. The results indicated that lower levels of perceived social supports from family and friends correlated with Type D personality. Low and average stress levels were correlated with higher levels of disengagement. Overall, individuals with Type D personality utilized maladaptive and passive coping styles, were disengaged from the stressful situation, and did not positively or actively react to the stress. Polman et al. thus demonstrated that caregiver personality affects the response to burnout and coping.

## **The Nature of Stress**

This section contains a review of the research literature that examined the nature of stress among caregivers. Burnout syndrome, caregiver strain and depression, and health disparities, were identified as related to stress. Older caregivers were also shown to experience higher levels of stress. The caregiving burden was identified as major contributor to stress. Social support and higher education levels were identified as protective factors against stress.

**Burnout syndrome.** Burnout syndrome was found to be related to stress (Pranjić, 2007). Pranjić (2007) examined the burnout syndrome among physicians in Bosnia-Herzegovina using the Occupational Stress Questionnaire (OSQ) and the Maslach Burnout Inventory (MBI). The results indicated a significant level of burnout among physicians. More specifically, Pranjić found that depersonalization, emotional exhaustion, and negative feelings about accomplishment contributed to the burnout syndrome. Additional factors that contributed to the high levels of burnout included increased work activities, being female, being single, or being young.

**Caregiver strain and depression.** Depression and anxiety is associated with caregiver burden. The relationship between depression and anxiety and the burden associated with caregiving as well as the stress in that specified job was explored by Phillips et al, (2009). Participants were divided into three cohorts (24-years-old, 44-years-old, and 66-year-old) and were interviewed about caregiving, social support, and sleep quality. The majority of caregivers were prominently females over 44 years old. The HADS scale was used to measure depression and anxiety. Analysis revealed a

correlation between caregiving and strain. Caregiving strain correlated with the number of hours spent on the caregiving tasks; thus caregiver strain was associated with burden and overall depression symptoms. As the caregivers aged, their anxiety decreased.

Women were found to be more depressed than men, which may have been because they completed the bulk of the caregiving tasks as the primary caregiver. Furthermore, social support among caregivers was negatively associated with depression and anxiety (i.e., the lower social support the higher depression and anxiety). Depressed caregivers were found to have fewer hours of sleep and higher burden and strain from the caregiving situation.

The burden and strain determined the severity of the symptomology of depression experienced by caregivers. The results of the study suggested that the nature of the stress might result in the depression or depressive symptoms among the caregivers.

Specifically, caregivers who feel burdened by the caregiving tasks are more likely to become depressed and anxious.

**Health disparities.** Poor health among caregivers was identified in Roth et al. (2009). Roth et al. found that emotional strain and physical health failed in family caregivers when caregiver strain and the effects of family caregiving were examined. Quality of life, depressive symptoms, and social participation of family caregivers were examined across a specified demographic sample.

Gabel and Adabbo (2011) also found a relationship between stress and physical health. The researchers conducted a meta-analysis on the Lazarus and Folkman (1984) model of stress to investigate the connection between perceived burden and the homecare situation. Positive aspects of caregiving were identified and included feeling needed and

being able to spend time with the care recipient. Negative aspects of caregiving were also identified and included perceived burden. Grabel and Adabbo reported that there are often impairments in the caregiver's health due to the caregiving tasks and also found that caregivers who have more health impairments were more depressed because, physical symptoms prevented the caregivers from completing caregiving tasks, which ultimately led to more burden.

**Stress among older caregivers.** Older caregivers face some of the same difficulties as others. Ekwall and Hallberg (2007) investigated caregivers over 75 years of age and examined the effects of gender, satisfaction, and extent of care difficulty among caregivers. Ekwall and Hallberg also tested instruments to measure satisfaction among caregivers and difficulties in family caregiving. Several questionnaires were used to address caregiving experiences. These included the Sense of Coherence (SOC), the SF12 to measure the health-related quality of life, and the Careers assessment of satisfaction was used to measure satisfaction. Analysis indicated that caregiving tasks were shared equally between men and women, with the majority of the caregivers caring for spouses. Findings also showed that caregivers reported negative consequence of caregiving. For instance, physical health impairments were associated with higher burden, but men were found to be more satisfied with the caregiving situation than women and viewed the experience positively. The data indicated that men also provided more caregiving hours and utilized more problem solving strategies for coping, which may have contributed to the satisfaction that they received from the caregiving experience.

Pinquart and Sorensen (2007) conducted a meta-analysis of burden and physical health in caregivers. They found that one factor contributing to poor physical health was the care recipient's health. For instance, the caregivers of spouses are older and the care recipients tend to have many ailments. As such, the health of the caregiver is affected, which may be due to the high demand of care required by the care recipient. Furthermore, the results indicated that caregivers often feel burdened when they are unable to complete their job due to physical ailments brought about by the older age of the caregiver and the greater likelihood of older individuals to experience illnesses. As a result, an illness experienced by the caregiver may impact their performance and in turn increase their burden level.

**The caregiving burden.** Caregiving tasks can increase the burden felt by caregivers (Grossfeld-Schmitz et al. (2010). Grossfeld-Schmitz et al. (2010) reported that burden increased when the intensity of the caregiving increased. The lack of personal time was attributed to the high rate of caregiver burden. Grossfeld-Schmitz et al. argued that often burden is emotional, financial, and physical. The researchers implemented a program to reach caregivers at the beginning of the diagnosis of the care recipients based on the hypothesis that caregivers need support during this crucial time period (Grossfeld-Schmitz et al., 2010). Counselors contacted the caregivers via telephone and focused on the caregiver and patients' experience, emotional situation, general framework, caregiving activities, social support, and additional caregivers' topics. The study indicated that caregivers view their situation and financial needs to be more important than the counseling; as such, they would not actively seek counseling.

Burden also is unique for those caring for individuals with severe mental illness and health problems. Weimand, Hedelin, Sallstrom, & Hall-Lord (2010) assessed the relatives of individuals with severe mental illness and health problems and the burden they faced as well as their sense of coherence and everyday difficulties faced. A cross sectional design consisting of the Burden Assessment Scale, Sense of Coherence Scale, the Short Form Health Survey, and a questionnaire were used. The results indicated that there was a high burden among relatives of the individuals with severe mental illness. Specifically, burden was highest among those who scored high on the Severity of Disease and Impact of Well-Being subscales. The study showed that physical functioning and emotional well-being was mostly affected by the mental illness of the relative. Likewise overall health was greatly affected by burden. The findings also indicated that burden was associated with caregivers not having someone with whom to share their feelings. Low social economic status was associated with burden and poor health, and burden was greater for those individuals who were widowed, single, or divorced as the responsibility may have been due to the lack of support and sharing of tasks. Finally, the study showed that relatives often felt a sense of obligation towards the individual with the mental illness.

A greater sense of burden was also associated with gender. Wijngaart, Vernooij-Dassen, & Feeling (2007) found that female caregivers have a higher sense of burden with the caregiving role and a greater sense of self-efficacy. According to Wijngaart et al., the higher sense of burden and greater sense of self-efficacy contributed to the sense of burden when spousal caregivers of individuals with dementia were assessed on

stressors, appraisal, coping, personal conditions, and social resources. They suggested that the reduction of caregiver burden can be achieved if the social functioning of the individual with dementia is improved and if the caregiver's perception is addressed.

Contrary to Wijngaart et al.'s (2007) study, Buchanan, Radin, and Huang (2010) found that male caregivers were more burdened with the caregiving tasks and their constraints of being unable to complete tasks they deemed as important. Buchanan et al.'s study explored the relationship of burden among male caregivers of individuals with multiple sclerosis, assistance provided, and the individuals who were in receipt of the assistance. The results also indicated that burden also was associated with the number of hours worked, and overall, the mental health of the caregivers was impacted.

**Social support as a protective factor.** Caregivers, both formal/professional and informal, are faced with stressful situations; however, research by Wilks and Croom (2010) indicated that some caregivers may complete their assigned tasks without any burden. Wilks and Croom used the Perceived Stress Scale-10, the Perceived Social Support Scale, and the Resilience Scales to examine the protective factors between the physical and mental health of caregivers as well as the protective factors that associated with resilience. The study results indicated that the relationship between the caregiver and the care recipient impacted resilience and social support and resilience were negatively influenced by perceived stress.

Similarly, Lin et al., (2010) investigated job stress, depression, and coping among Taiwanese nurses using the Beck Depression Inventory, Taiwanese Nurse Stress Checklist, and Jalowiec Checklist. The results indicated that depression was correlated to

job stress and affective oriented coping. The authors found that problem oriented coping was used by the nurses, and social support was a mediator in decreasing the effects of the stress. .

Research by Brazil, Brainbridge, and Rodriguez (2010) also revealed that stress among caregivers is related to support symptoms for the care recipients. Caregivers of palliative cancer patients were interviewed to investigate how the stress process model could clarify the stressors experienced when caring for an individual with an illness. The stress process model contains four principles: (a) primary stressors, (b) secondary strain, (c) resource that moderated caregiving stress, and (d) outcome. The model views stress as it relates to all areas of the caregiver's life including social functioning, family, life, and work. Brazil et al. found that patient symptoms and the intimate needs of the patients were associated with stress. Caregivers with financial difficulties and difficulties at work were also more stressed. The lack of support from the health care delivery system and communication between caregivers and providers contributed to stress. Caregivers tended to supplement the formal care received with additional private care, which added to the stress level felt by the family caregiver. Brazil et al. found that stress was moderated by support from friends, family, and neighbors. The implication of the study was that the implementation of a support system for caregivers is important for the health and well-being of caregivers (Brazil et al., 2010).

**Higher education levels as a protective factor.** Research indicated that higher education levels resulted in less anxiety among caregivers. Furthermore, those caregivers who were more educated were less likely to be anxious, and those caregivers were more

stressed and depressed when the care recipients had more disruptive behaviors (Chun et al., 2007). According to Chun et al., the education level of caregivers appeared to influence feelings of being burdened. The education of the caregivers may have opened them to a wider area of experience thus providing them with tools for handling stressful situations in a more positive manner.

**Summary.** Research has indicated that stress is manifested in a variety of ways among caregivers. Physical health issues among caregivers has been associated with level of time in the caregiving role, behavior problems and cognitive impairments of the care recipient, lower socioeconomic status, health of caregiver, co-residence, and length of time as a caregiver (Brazil et al., 2010; Chun et al., 2007; Grossfeld-Schmitz et al., 2010, Kim & Schultz, 2008; Lin et al., 2010). Caregiver's depression also affected physical health. Other studies showed that caregivers are burdened by their caregiving role. Feelings of burden were associated with caregivers being unable to complete their tasks, and poor caregiver health added to the stressors experienced by these individuals. In many situations, caregivers provide the ongoing care without accounting for their own health or well-being; thus, the relationship becomes burdensome. This aspect of caregiving is especially important when considering the care of individuals with DD/ID because these individuals require a specific level of care, and often their family members are tasked with the job of providing the care needed.

Caregivers are tasked with a number of responsibilities in their caregiving roles. Often times these individuals are trusted into these roles as their spouses or family member becomes ill and require physical assistance to complete daily tasks. As the role is

forced upon the caregivers no preparation for the role is provided as such they are left to cope with the additional responsibilities. Many times these responsibilities result in feelings of stress, burden, depression, an additional stress. The way an individual handles the role contributes to the level of stress or depression experienced. Research has demonstrated the impact of caregiving within the informal caregiving population; however, there continues to be a lack of research among caregivers of individuals with intellectual disabilities/developmental disabilities. In order to address this gap in the research, I investigated the effect of the caregiving role among caregivers of individuals with intellectual and developmental disabilities.

### **Coping**

Caregivers sometimes have difficulty managing the stress in their caregiving role (Barbosa et al., 2011) and employ poor coping strategies when burdened (Grabel & Adabbo, 2011) and when faced with stressful situations in their caregiving role (Barbosa et al., 2011). However, caregivers with higher levels of self-efficacy and caregivers who have emotional support utilize problem solving coping strategies (Wijngaart et al., 2007). This section of the literature review includes a discussion of the research into coping strategies used by caregivers.

**Emotion-focused and problem-focused coping.** Physical and mental health may be affected by thoughts and actions aimed at relieving the emotional impact of stress, which is named emotion-focused coping (Kim, Knight, & Longmire, 2007). Caregivers use emotion-focused coping strategies to cope with stressful situations and caregiver burden. The relationship between the coping styles of caregivers of individuals with

Alzheimer disease and anxiety and depression were investigated by Cooper, Katona, Orrcell, and Livingston (2007). The researchers interviewed the caregivers at recruitment and again one year later using the Hospital Anxiety and Depression Scale, the Zarit Burden scale, and the Brief COPE to measure anxiety, depression, burden, and coping. The results indicated that caregivers utilized emotion-focused coping strategies which lessened burden among the caregivers. On the other hand, caregivers who utilized problem-focused coping strategies were more burdened in the long term. Implications included the use of psychological factors on coping (Cooper et al., 2007).

Kim et al. (2007) reported that families with strong loyalties resulted in poorer mental and physical health, and they tended to use more avoidant coping strategies, which were more emotion-focused. Kim et al. argued that if caregivers were more open to addressing the problem or the situation then they would be less likely to experience physical health problems.

#### **Relationship between personality characteristics and coping strategies.**

Chappell and Dujela (2009) also examined the coping strategies used by heavily burdened caregivers in order to understand why a strategy was utilized. They also examined the effects of personality characteristics on coping. Chappell and Dujela interviewed caregivers and the participants completed the Ways of Coping Questionnaire. One year later, the participants completed the Reliability Change Index. Chappell and Dujela found that problem focused coping strategies are more likely to be used by older caregivers and younger caregivers tended to employ emotion-focused coping strategies. They also found that caregivers of individuals with more or higher levels of disability

also used negative emotion-focused coping strategies. The personality characteristic of openness to experience and neuroticism were found to be predictors of problem-focused coping strategies. In sum, the study found that caregiving demands affected coping strategies, and caregivers employed negative problem-focused coping strategies.

**Factors contributing to positive experiences.** Despite the evidence that caregivers suffer as a result of their caregiving responsibilities, some caregivers, when trusted in their new role, excel. These individuals appear to enjoy the new role and have positive experiences. Roscoe, Corsentino, Watkins, McCall, and Sanchez-Ramos (2009) examined caregivers of individuals with Huntington's disease and found that caregivers were extremely stressed and invested more hours per week in the caregiving tasks because the care recipients required a high degree of care. However, Roscoe et al. argued that when caregivers were satisfied with their life and health, had a good caregiving experience, and had emotional support, they viewed their performance as positive. In these cases, caregivers reported that they were able to handle their stress. Another finding indicated that their ability to handle stress was related to a high degree of spirituality.

**Protective coping strategies.** Research also has indicated that stress and depression was managed by protective factors. Specifically, the support that the caregiver received tended to reduce the level of stress experienced, and caregiving tasks, level of disability, and child behavior often affected the stress levels (Plant & Sanders, 2007). Several different strategies can be implemented to assist caregivers in coping with their new role. According to Qui and Li (2008), planning, positive reframing, acceptance, active coping, support and humor were some of the strategies that are used by caregivers

to cope with depressive symptoms. Qui and Li identified coping strategies and indicators of depression using a correlation and cross-sectional design. The Brief Cope, Short Portable Mental Status Questionnaire, Barthel Index (BI), and the Center for Epidemiological Depression scale was used to measure coping and depression. Qui and Li found that depression was prevalent among caregivers and was influenced by the responsibility of the job, financial burden, planning, and cognitive and functioning status

Research indicated that caregiver support is an integral part of coping in stressful situations. MacKay and Pakenam (2011) conducted a longitudinal study using the Lazarus and Folkman (1984) stress and coping theory as a theoretical foundation. Participants were assessed twice in a 12 month period (month 1 and month 12) to measure life satisfaction, positive affect, benefit finding, physical health, stress, coping, and psychological distress. Findings indicated that distress was affected by the care recipient's diagnosis, level of care, and the unpredictability of the symptoms. Furthermore, the results indicated that the caregivers were able to adjust to their new role without any distress as a result of social support, better coping skills, and higher controllability and challenge appraisal. The study also showed that the stress and coping model (Lazarus & Folkman, 1984) was valuable for assisting in caregiver adjustment through guidance and identification of risk and protective factors.

**Summary.** The research included in this section identified and tested coping strategies shown to reduce stress in familial caregiving situations. Plant and Sanders (2007) identified caregiver support to be integral in reducing stress, whereas Qui and Li (2008) identified positive reframing, planning, acceptance, and active coping were other

strategies to reduce stress. A significant implication of the research is that support of the caregivers is integral in ensuring that there is a positive aspect to the caregiving relationship. Coping with stress is important to the research but is beyond the scope of this study. In this study, I identified the correlation between how the participants cope with the stress of their job and personality traits.

### **Types of Caregivers and Stress and Coping**

This section contains a review of the literature on stress and coping among different categories of caregivers. Although my target population was the DSPs of individuals with DD/ID, the paucity of research into the targeted population necessitated an examination of research into other groups in order to identify variables applicable to the study. Specifically, this section includes an exploration of family caregivers, professional caregivers, and residential caregivers.

**Family caregivers.** Through personal care and interaction, family caregivers are able to provide day-do-day care for their loved ones (Lee & Singh, 2010); however, family caregiving is a stressful situation (Perrig-Chiello & Hutchison, 2010). Family and professional caregivers of the same care recipient were studied to determine the perceive burden between the groups, stressors, resources, well-being, kinship, and gender (Perrig-Chiello & Hutchison, 2010). Spousal caregivers were often left with the brunt of the caregiving, which results in stress and strained relationships as they tend to invest more time in the caregiving needs of the care recipients.

Monin, Martire, Schulz, & Clark (2009) investigated the willingness of care recipients to express their emotions to their spousal caregivers. Consistent with other

research, Monin et al. found that the caregiving daily tasks were extremely stressful for the caregivers, but their results indicated that care-recipients who are willing to express their emotions to their caregivers tended to be less demanding, thus creating a less demanding relationship. Gender was found to be a significant factor in the expression of emotions as females were happier when their husbands expressed their emotions.

In an attempt to decrease the burden of caregiving, the family caregiver may opt to have the care recipient placed at a nursing home facility. However, research suggested that often the burden of care continues once the care recipient was placed in a nursing home. Gaugler, Mittleman, Hepburn, & Newcomer (2010) examined the effects of stress and depression among family caregivers following institutionalization. Gaugler et al. found that the feeling of burden and depression continued after placement for female caregivers, which may be attributed to their hands on approach with the care. A female caregiver also may have difficulty adjusting to their reduced involvement, thus become more depressed.

A contributing factor to the level of burden after institutionalization may be due to the intensity of the care needed from the care recipient. For instance, an individual with more significant needs, such as behavioral difficulties, may require a more intense level of care thereby forcing their relatives to be involved in their lives after nursing home placement. Depression also was found to be prevalent among males who did not have a support system after their loved one was placed in a nursing home setting. Caregivers with emotional issues prior to the nursing home placement were also more likely to be

depressed after the placement, whereas other caregivers experienced a decrease sense of burden after their relative was institutionalized.

Parents have the difficult job of providing the care for their child when he/she is mentally ill and has a diagnosable condition. Butterworth, Pymont, Rodgers, Windsor, and Anstey (2010) examined the mental health effects of caregiving on older adults. Depression and anxiety was addressed using the Goldberg scales, and results indicated that poorer physical and mental health resulted from being a caregiver. Butterworth et al. also found that other stress factors included financial stress, household responsibilities, and a decrease in social support. The researchers argued that often the level of responsibility and the various areas of need for the child were too grave for the parents to cope or accept. Furthermore, many times the parents were predisposed to depression and tended to internalize their problems, which is a major contributing factor to depression. The study was limited due to the small demographic set of caregivers aged 64-69 years; as such the findings cannot be generalized to the entire population. Nonetheless, research indicated that older caregivers have different experiences than younger caregiver, and the experience may have a greater impact on their physical health.

Gerkenmeyer et al. (2008) examined depression among primary caregivers of children with mental health problems using the Center for Epidemiological Depression Scale. The results indicated that social support decreased depression among parents with mentally ill children. Parental caregivers of children with behavior problems were more likely to be depressed as they often had to deal with higher levels of child behavioral problems. Furthermore, depression among parents was correlated with the age of the

child and the social support received. Perceived personal control, role disruption, and subjective distress were found mediate parents' depressive symptoms and the child's problem, thus decreasing the depressive symptomology amongst parents. Depressive symptoms among parents were also affected by externalizing and internalizing problems of the children. However, if there was intangible social support available for parents, the depressive symptoms decreased. Moreover, social support decreased the depression amongst parents, but only if the internalizing behavior problems of the child was low. The limitation of the study was the convenience sample used, and the cross sectional data did not reveal all aspects of the caregiving intended.

In a similar study, parents of children with a developmental disability or at risk for a developmental disability were examined using the Beck Depression Inventory (Feldman et al., 2007). The results indicated that the parents were at a higher risk of developing depression due to the lack of social support and parental self-efficacy and behavior problems amongst the children. These caregivers often employed escape-avoidance coping strategies as a way to deal with the problems at hand. However, the study was limited in that it only included a specific group of caregivers from a specific population. The children's diagnosis was not specific to a developmental disability but may have included other conditions such as low birth weight. As such, there may be issues with generalizing the findings to the general population.

The nature of the disease also contributes to the stress experienced by family caregivers. For instance, because individuals with Alzheimer's' disease loses functioning they must rely solely on caregivers to provide for their daily needs (Ferrara et al., 2008).

Ferrara et al. (2008) examined stress, anxiety and depression with Alzheimer's caregivers. The results indicated that the caregivers reported an overall change in their quality of life including less leisure time, lax social life, and being emotionally drained. Their health was also affected by lack of sleep, physically tiredness, and physical illness.

In many instances, caregivers for children with intellectual disabilities are often forced into the role of caregiver. The extra stress of caring for more than one person resulted in feelings of wanting to place a child into a residential setting because of the lack of personal time left available. Many times, the hours of care per week exceed 40 hours because of the time constraints of providing care for several individuals. As a result, the mental and physical health of the caregiver suffered. These caregivers were already aging and the extra stress of caregiving also may have contributed to the symptoms of depression (Perkins & Haley, 2010). Another area of importance was the diagnosed condition of the child, which may have contributed to the level of stress among caregivers.

### **Professional Caregivers**

Unlike family members, who often become caregivers out of a sense of duty, professional caregivers are individuals who intentionally choose the work and are prepared for the demands of the job. The pool of professional caregivers includes nurses, social workers, and other professionals who receive payment for their services. However, despite the training received, professional caregivers are faced with some of the same stressors experienced by the informal caregivers. This section contains a discussion of the research on stress and coping among professional caregivers.

Boekhorst, Willemsse, Delpa, Eesfting, and Pot (2008) found that when the differences between nursing home and group home staff was investigated, the researchers found that the group home setting provided for more supportive staffing and less work demands. Data were collected using the Job-Demand-Control-Model to assess the differences in nursing staff of individuals with Dementia who reside in group home versus nursing homes. The Leiden Quality of Work Questionnaire, a self-report measure, was used to assess demands, control, and social support. The results indicated that within the group home setting, control and co-worker support was significantly higher whereas demands were lower. Staff within the group home experienced more job satisfaction, indicating less burnout. According to the authors, psychosocial job characteristics mediated for job satisfaction and emotional exhaustion. Likewise, control and social support mediated the effects of depersonalization.

Testad, Mikkelsen, Ballard, and Aarsland (2010) investigated nursing home staffs' psychological factors and patient factors in relation to stress in a cross-sectional survey. Organizational, psychosocial, and resident factors were measured using the Perceived Stress Scale, Hopkins Symptoms Checklist, Cohen-Mansfield Agitation Inventory, and the General Nordic Questionnaire for Psychosocial and Social Factors at Work. The results indicated that caregiver stress was more adequately predicated by psychosocial factors. Staff that possessed leadership, control of work, and mastery skills possessed better health and well-being. Low stress was also influenced by the accommodations available to the care recipients and included better bathroom accommodations and higher ratio of staff. Psychosocial factors may contribute to stress

management but the inclusion of these variables is beyond the scope of this research. However, this research is focused on how the caregiver's personality characteristics can affect his/her coping abilities when faced with stressful situations. The identification of individuals who possess certain personality characteristics that enable them to cope better with stress will enable the employers to be more selective in the hiring process thereby resulting in a more stable workforce.

The satisfaction of the staff has been found to be an important characteristic in the job stress equation. Coomber and Barriball (2007) examined job satisfaction and intent to leave the job using a meta-analysis of research drawn from three databases including the BNI, CINAHL, and PsychInfo. The purpose of the study was to assess job satisfaction and intent to leave among nurses. The meta analysis revealed four areas including leadership, educational attainment, pay, and stress as the main factors that influenced the turnover rates. Specifically, stress levels and low pay were associated with high turnover and intention to leave.

### **Residential Caregivers**

Residential caregivers are those individuals who live within a caregiving institution and provide direct care to the residents of the facility. Residential caregivers are similar to direct-support staff in that both work in residential settings as such they often have similar experiences. These direct support staff are at the forefront of providing care for individuals with intellectual disabilities as they provide for all the needs of the clients. These individuals can be easily overwhelmed by the caregiving needs of the clients. Gray-Stanley et al. (2010) assessed the depression and stress levels of DSPs of

individuals with intellectual disabilities. The goal was to investigate the correlation between work stress resources and depression while controlling for socio demographic variables. Depression was assessed using the Center for Epidemiologic Studies (CES-D). Work stress was assessed in five areas: (a) work overload, (b) role ambiguity, (c) role conflict, (d) limited work related decisions, and (e) client disabilities. Work support and locus of control was assessed using scales created by the researchers. The results indicated that depression positively correlated with work stress; work load, level of care, and participation in the decision making process were the most identified stressors. Work overload was positively correlated with depression. Some moderating effects were identified. For instance, there were some interaction effects between resources and work stress; client disability was moderated by work support, role conflict was moderated by supervisor support, and work overload and depression was moderated by locus of control. A key determining factor in decreasing the levels of depression amongst caregivers was the support received.

Eastwood and Euckland (2008) explored compassion fatigue among staff who works with children. Compassion fatigue resulted from feeling stressed and overwhelmed. The researchers found that socializing with friends, taking short breaks, getting appropriate sleep, and eating adequate meals resulted in a decreased feeling of stress. As such, the most important aspect of decreased stress was the need for self-care, which was named a protective factor. Self-care was correlated with the level of burnout faced by these caregivers; thus, individuals with high levels of burnout were related to decreased levels of self-care and increased risk of compassion fatigue. Furthermore, the

effects of burnout were associated with decreased empathetic concern and decreased feelings of being successful.

Direct service professionals tend to experience the bulk of the caregiving tasks, which can negatively impact the decision to leave. Mittal, Rosen, and Leana (2009) investigated the factors associated with turnover among direct service professionals. Seven focus groups were conducted, and the results indicated that lack of pay, inadequate management, work or family conflicts, difficulty of work, and job openings elsewhere were associated the high turnover rates. On the other hand, retention rates among direct service professionals were associated with patient advocacy, positive relationship with patients/individuals serviced, being “called” to service, flexibility, haven from home problems, and religion or spirituality. In general, the research has indicated that work support decreased the levels of stress. Specifically, supervisor support and the client disability stress moderated the effects of stress on the support staff. The implication is that the underlying problems associated with retention and turnovers should be addressed in order to maintain a stabilized workforce.

### **Conclusion**

Research has demonstrated that stress manifest differently amongst caregivers. Caregivers’ physical health has been compromised (Brazil et. al, 2010; Grossfeld-Schmitz et. al, 2010) when stressed. Stress has also led to depression and feelings of burden (Kim & Schultz, 2008). Caregivers are faced with many responsibilities which can be attributed to feelings of stress and burnout. Pranjić (2007) found that burnout was related to increased work activities. Personality characteristics influence how individuals

cope with stress (Lockenhoff et. al, 20011; Koermer & Kenyon, 2007). Caregivers cope differently when faced with stress. Caregiver support was found to assist in reducing stress (Plant and Sanders, 2007) where as positive reframing, acceptance, and active coping were other stress reducing techniques (Qui & Li, 2008). Both familial and professional caregivers are faced with stressful situations in the caregiving role. As a result of the caregiving responsibilities, family caregivers often experience a life changes and physical ailments caused by the caregiving tasks. These physical symptoms are also experienced by professional caregivers, namely nurses and social workers (Testad et. al, 2010).

Throughout the literature review several gaps within the research on caregiving has been highlighted. The issue of caregiving to a great extent and have focused especially on family caregivers who are at the forefront of providing care to loved ones. Researchers have looked at either the professional caregivers within the medical field or the family caregivers or informal caregivers providing care to relatives or loved ones. The magnitude of the research has been limited to that population. However, the caregiving population extends beyond that of the aforementioned population and programs and further research is needed in the neglected fields to understand the caregiving population. Further exploration of the personality characteristics of caregivers will add to the existing literature on caregivers as well as provide an understanding of how caregivers approach stress and coping. The identification of the characteristics that enable caregivers to better cope with stress will also assist in better hiring practices for organizations that employ the caregivers.

Chapter 3 provides details of the research design, participant sample, recruitment and data collection, threats to validity, ethical procedures, as well as the instruments used for this research.

## Chapter 3: Methodology

### **Introduction**

The purpose of this quantitative correlational study was to test the relationship between stress, coping, and personality characteristics among DSPs for the DD/ID population. The study will explore the relationship between (a) stress and coping, (b) personality characteristics and stress, and (c) personality characteristics and coping. Professional direct support staff ( $N = 69$ ) were identified based on the calculated sample size of 55 derived from the G\*Power program. Correlation and multiple regression were included in the equation. The participants included adults over 18 years old.

This chapter includes an overview of research and design rationale; the methodology, including sampling procedures, population, recruitment, participation, and data collection; an overview of the instruments, threats to validity, operationalization of constructs, and data analysis.

### **Research Design and Rationale**

In this study, the dependent variable was stress and the independent variables were coping and the five personality characteristics of neuroticism, openness, extroversion, conscientiousness, and agreeableness. The quantitative, correlational research design was chosen as the objective of this study was to establish the relationship between stress, coping, and personality characteristics of direct support professional caregivers of individuals with DD/ID. Regression and correlational analyses was used in this study. A correlational design was an appropriate approach in examining the relationship between stress, coping, and personality characteristics of direct support

caregivers of individuals with DD/ID because it examines the relationship between variables (Aiken et. al, 2003). This approach was chosen because the participants were not randomly assigned to a perspective group and manipulation was not conducted. Instead, the participants reported their personal feelings and experience on the three survey instruments used. Thus, a correlation analysis enabled me to see the correlation between stress, coping, and personality characteristics of direct support caregivers of individuals with intellectual disabilities/developmental disabilities and the significance level. A regression analysis captured the effect of certain personality characteristics such as neuroticism, extroversion, conscientiousness, agreeableness, and openness to experience on stress levels and coping skills

The survey was the preferred method of data collection because of the quick turnaround time and response. The participants were asked to complete three survey instruments that too approximately 30 minutes. Each instrument has been tested for reliability and validity (Lazarus & Folkman, 1986; Cohen & Janicki Deverts, 2012; McCrae & Costa, 2004). Scholars have used the survey instruments in a number of research projects prior to the use in this research (Narumoto et al., (2008); Plant & Sanders (2007); Testad et al. (2010). The design choice in this study is consistent with research designs that advance knowledge in the discipline. Vellone, Piras, and Sansoni (2002) used a correlational quantitative research design to advance knowledge in the discipline by explaining the relationship between caregivers stress and their coping behaviors. Stallwood (2005) used a correlational quantitative research to advance knowledge in the discipline by explaining the effect of coping on caregivers stress.

## **Methodology**

### **Population**

The target population was 69 participants selected from eight 24-hour residential facilities that house individuals with DD/ID. The study targeted adults over 18 years old who had been employed in the caregiving field for approximately 6 months. This 6-month range of experience included time worked at various agencies. This employment time criterion was used because it would allow DSPs to have been exposed to the stressors of the job such as the caregiver tasks, supervisors' directives, and working relationship with other staff. The 6-month criterion also allowed the caregiver to have become acclimated to the new experience of the job. Participation in the study was voluntary and there was no compensation available for those who participated.

### **Sampling and Sampling Procedures**

In order to collect the needed data, I used a convenience sample from approximately eight 24-hour residential facilities that house individuals with DD/ID. The convenience sampling method is common when measuring relationships among variables, which is characteristic of the study (Dillman, Eltnige, Groves, & Little, 2002). I created a slot sheet; obtained, divided, and numbered the lists; drew a sample without replacement, and filled in the slot sheet. The sample size included the professional formal direct support caregivers over 18 years old who worked in the facilities.

A power analysis was conducted to determine sample size using the G\*Power statistical program. This program uses the effect size (0.15), probability level of statistical significance (0.05), and the statistical power (0.80) as well as the number of predictor

variables computed the sample size (Erdfelder, Faul, & Buchner, 1996; Erdfelder, Faul, & Buchner, 2005; Faul, Erdfelder, Lang, & Buchner, 2007). The G\*Power statistical program indicated a total at least of 55 participants were required. I recruited a total of 69 participants.

### **Procedures for Recruitment, Participation, and Data Collection**

Potential participants were recruited from eight 24-hour residential facilities that house individuals with DD/ID. The study was introduced to the potential participants and their involvement was solicited. The study used a convenience sample design and controlling for the bias was difficult based on the sample acquired.

The participants were provided with a short demographic questionnaire that requested the age, years of experience, and gender. The participants were provided with an informed consent document that explained the purpose of research, the procedure of the study, the outline for voluntary participation, compensation provided, benefits of participation, and privacy indicators. I met individually with the individuals who indicated willingness to participate in the study. The participants were assured that their participation is confidential and their identity was anonymous. I administered and delivered the survey instruments through a scripted explanation and paper and pen format. The survey instruments included the Perceived Stress Scale (PSS), Ways of Coping Questionnaire (WAYS), the demographic survey questionnaire, and the NEO-Five Factor Personality Inventory-3. An ordinal scale was used to collect data. The participants completed the instruments independently, and I transferred the responses to an SPSS spreadsheet.

The survey method of data collection had benefits and limitations (Dillman et al., 2002). The individual attention given to the participants eased concerns about participation and provided support. However, the participants may not have understood the questions presented and may have answered deceptively. Nonetheless previous research on this topic has used the survey method for data collection. Upon the completion of the survey instruments, the participants were thanked for their participation and re-assured that their identity would be withheld and anonymity would be ensured. There was no follow up with the participants.

### **Instrumentation and Operationalization of Constructs**

A demographic questionnaire assessed basic information regarding the participant's age, gender, and work experience. Data on stress, coping, and personality styles of DSPs was collected. The Perceived Stress Scale was used to determine the stress levels faced by the subjects. Likewise, the Ways of Coping Questionnaire provided information on coping among the participants, and the NEO-FFI 3 was used to identify the personality characteristics of each of the participants.

#### **Perceived Stress Scale-10**

The Perceived Stress Scale-10 (PSS-10) is a 10 item self-report questionnaire that examines the individual's perspective of managing stress and stressful situations within the past month (Appendix A). The Perceived Stress Scale-10 was developed by Cohen et al. (1983) and was appropriate for the study to examine the correlation between stress, coping, and personality characteristics. Because I sought to examine the caregiver's perception of their stress, this scale was most appropriate because stress measures the

individual's response to stressful situations using a variety of scenarios. Cohen and Janicki-Deverts (2012) used the Perceived Stress Scale (PSS) in their research on psychological stress where they assessed participants in 1983, 2006, and 2009 using three national surveys. In 1983, the Harris Poll survey was completed. A total of 960 males and 1427 females responded. The sample size was based on the U.S. Census (Cohen & Janicki-Deverts, 2012). The completed eNation Surveys were completed in 2006 and 2009, and 2000 adults responded. Cohen and Janicki Deverts (2012) selected the participants from the online segment of the Synovate' Consumer Opinion Panel.

Cohen and Janicki Deverts (2012) established the reliability and validity for the PSS-10. The Cronbach's alpha was .85. The alpha coefficient was acceptable by Nunnally's (1978) criterion of .70. Construct validity is used to express reliability. The alpha coefficient of the PSS-10 was acceptable by Nunnally's (1978) criterion of .70. Thus, the PSS-10 has high construct validity. Given the demonstrated validity and reliability of the PSS-10, I used it as a measure of the individual's view of their handling of stress and stressful situations.

The participants were asked to rate their perception of stress over the past month using a 5-point scale that ranged from 0 to 4; (0 = *never*, 1 = *almost never*, 2 = *sometimes*, 3 = *fairly often*, 4 = *very often*). Sample items included the following items: "In the last month, how often have you been upset because of something that happened unexpectedly?," "In the last month, how often have you felt that you were unable to control the important things in your life?," "In the last month, how often have you felt nervous and "stressed"?", "In the last month, how often have you felt confident about

your ability to handle your personal problems?,” “In the last month, how often have you felt that things were going your way?,” and “In the last month, how often have you found that you could not cope with all the things that you had to do?” Based on the responses, I determined the level of stress the participants had experienced.

The Perceived Stress Scale-10 was obtained through a website, and there is no fee for use or purchase when the instrument is used for research purposes. Permission for the scale to be used in academic research was not needed as per the website (Appendix F). The Perceived Stress Scale was written for individuals to have at least a junior high school level of education to completion. The test takes at least 10-15 minutes to complete. I completed the scoring for the PSS-10 by reverse coding items 4, 5, 7, and 8 and then summing the reverse coded items with the remaining items. The responses for the paper and pen administration were transferred to SPSS spreadsheet.

### **Ways of Coping Questionnaire**

The Ways of Coping Questionnaire (WAYS) is a 66-item self-report questionnaire that assesses the coping style of the individual when faced with a stressful situation (Appendix B). Lazarus and Folkman (1986) developed the Ways of Coping Questionnaire (WAYS). The Ways of Coping Questionnaire was appropriate for use in this study as a way to examine the correlation between stress, coping, and personality characteristics. The normative sample on which the coping scales (Folkman & Lazarus, 1988) was based upon used participants who were asked to discuss stress in their role as caregivers in raising children. The authors interviewed both parents, asked them to depict their most stressful situations during the previous week, and to complete the survey.

Although the sample was based on parents, their roles of caregivers are comparative to that of professional caregivers in that they experience similar stressful situations. The parents included in the Folkman and Lazarus (1988) sample had more than 6-months of experience as caregivers, which is similar to the criteria for participants in my study.

The Cronbach's alpha range for the questionnaire was .61 to .79 for all scales (Folkman & Lazarus, 1988). Most of the alpha coefficients were satisfactory by Nunnally's (1978) criterion of .70. The authors reported the items have face validity because they "are those that individuals have reported using to cope with the demands of stressful situations" (Folkman & Lazarus, 1988, p. 14). Thus, the Ways of Coping Questionnaire was recommended for use as a measure of the coping style of an individual when faced with a stressful situation.

The study assessed the coping style of caregivers/direct care professionals of individuals with DD/. Previous research has identified caregivers engaging in either problem-focused coping or emotion-focused coping (Lazarus & Folkman, 1998). The target sample for this research consisted of direct care professionals who were also caregivers. However, direct care professionals, who are also caregivers, seek to provide care for individuals with Developmental Disability/Intellectual Disability as opposed to family members. Therefore, the Ways of Coping Questionnaire was appropriate for the identified sample.

The Ways of Coping Questionnaire is based on a 4-point Likert Scale where "0" signifies "*not used at all*" and "3" represents "*used a great deal.*" Scores, when tallied, equal 100 and represent the total score. Within the total score, an Emotion Focused

Coping score and a Problem Focused Coping score was derived. Within the Emotion Focused Coping and Problem Focused Coping scales, a total of eight subscales were obtained. Emotion Focused Coping subscales included confronting coping, distancing, self-controlling, and escape avoidance. Problem focused coping subscales include seeking self-support, accepting responsibility, planful problem solving, and positive reappraisal. The confronting coping, distancing, planful problem solving, seeking social support subscales consists of six items. The self-controlling and positive reappraisal subscales consist of seven items. The accepting responsibility subscale consists of four items. The escape-avoidance subscale consists of eight items. The positive reappraisal subscale was made up of seven items. The questionnaire includes items such as “I did something that I didn't think would work, but at least I was doing something, I tried to get the person responsible to change his or her mind, I talked to someone to find out more about the situation, I criticized or lectured myself, I tried not to burn my bridges, but leave things open somewhat.”

The Ways of Coping Questionnaire was administered using paper and a pen format to the 55 participants. I purchased the license to reproduce 100 questionnaires through the Mind Garden website and the permission letter from the developer to use the instrument was obtained (Appendix C). The responses for the paper and pen administration were done manually by the participants, and I then transferred the responses to the SPSS spreadsheet, which was used to compile the answers.

### **NEO-FFI 3**

The NEO FFI-3 is a short and simple version of the NEO Personality Inventory (NEO-PI-R). Costa and McCrae (2004) developed the NEO FFI-3 in 2004 (Appendix D). The NEO FFI-3 was appropriate to the study that examined the correlation between stress, coping, and personality characteristics. McCrae and Costa used two samples to select new items, thus establishing the reliability and validity of the scale. The first sample included 1959 high school students who were in psychology courses. The majority of participants were girls (McCrae et al., 2002). The second sample consisted of 1492 adults, age 19–93-years-old from the Baltimore Longitudinal Study of Aging (Shock et al., 1984). The participants were highly educated volunteers who had returned to the Gerontology Research Center. The majority of participants were White, 27.6% of the sample was Black, and 7.3% of the sample was other race. There were 695 men and 797 women. The utilization of these two samples offered cross-validation. The alpha coefficient for the NEO FFI was 0.91. The alpha coefficient was acceptable by Nunnally's (1978) criterion of .70. and construct validity was seen to express reliability. The alpha coefficient for the NEO FFI was 0.91. Thus, the NEO FFI has high construct validity. In this study, I showed construct validity by demonstrating the results that the reliability indices gave.

Researchers can use the NEO FFI-3 on individuals ages 12 through 99-years-old. The NEO-FFI3 measures five factors of personality, including neuroticism, extroversion, openness, agreeableness, and conscientiousness. The NEO FFI-3 takes at least 10-15 minutes to complete. The research design assessed the personality characteristics of

professional caregivers. Previous research has indicated that personality characteristics play a role in the individual's ability to cope.

The NEO FFI-3 is based on a 5-point Likert Scale. "1" signifies "*strongly disagree*" and "5" symbolizes "*strongly agree*." Sample items included the following items: "I am not a worrier," "When I'm under a great deal of stress, sometimes I feel like I'm going to pieces," "I rarely feel lonely or blue," "Sometimes I feel completely worthless," "I waste a lot of time before settling down to work," and "I often feel tense and jittery." The NEO FFI-3 was administered using paper to ensure that the adequate number of participants was obtained. The license to reproduce 100 questionnaires through the PAR, Inc. website was purchased. Permission from the developer to use the instrument was obtained (Appendix E).

For this research, I investigated the correlation between stress, coping, and personality variables among caregivers of individuals with DD/ID. The dependent variable was stress, and the independent variables were coping and the five personality traits.

### **Data Analysis**

The study used a correlation research design involving multiple regression analysis. The statistical program SPSS 20 was used for data analysis. I cleaned data by replacing missing data with zero and ran an outlier analysis (e.g., a run-sequence plot). The instruments used for measurement of the variables allowed for the data to be analyzed through regression analysis. The research questions and the hypotheses reflected this type of analyses. The research questions and hypotheses were as follows.

**Research Question 1**

What is the correlation between stress and coping among the professional caregiving population of the developmental disabled/intellectually disabled individuals as measured by the Perceived Stress Scale and the Ways of Coping Questionnaire?

*Alternative Hypothesis 1:* It is hypothesized that there will be a high correlation between stress and coping in caregivers within the DD/ID population.

*Null Hypothesis 1:* There is no correlation between stress and coping in caregivers within the DD/ID population.

A correlational analysis to test whether there was a high correlation between stress and coping in caregivers within the developmental disabled/intellectually disabled population was conducted.

**Research question 2**

What is the correlation between stress and personality characteristics as measured by the NEO-Five Factor Personality Inventory-3?

*Alternative Hypothesis 2:* Certain personality characteristics such as neuroticism, extroversion, and conscientiousness are associated with high stress levels.

*Null Hypothesis 2:* There are no personality characteristics that are associated with increased stress.

I conducted a correlation analysis to test whether there was a high correlation between stress and personality characteristics as measured by the NEO-Five Factor Personality Inventory-3. I conducted a regression analysis to test whether there was a significant association between personality characteristics on stress.

### **Research Question 3**

What is the correlation between coping and personality characteristics among the professional caregiving population of the DD/ID individuals as measured by the NEO Five Factor Personality Inventory-3 and the Ways of Coping Questionnaire?

*Alternative Hypothesis 3:* It is hypothesized that caregivers with the personality characteristics agreeableness and openness to experience will utilize better coping skills.

*Null Hypothesis 3:* Caregivers with agreeableness and openness to experience will not have utilized better coping skills.

I conducted a correlation analysis to test whether there was a high correlation between coping and personality characteristics among the professional caregiving population of the DD/ID population as measured by the NEO Five Factor Personality Inventory-3, and the Ways of Coping Questionnaire.

### **Threats to Validity**

#### **Threats to External Validity**

In this study, I examined the relationship between stress, coping, and personality characteristics among the DSPs in the DD/ID population. The participants included adults over 18-years-old. A convenience sample was used. I was seeking to generalize the findings to a larger population based on the assumption that the results appear in all people. However, the professional direct support staff selected for the convenience sample did not represent the greater population. Thus, I cannot generalize the relationship between stress, coping, and personality characteristics among direct support caregiver

adults over age 18 nor can I generalize the relationship between stress, coping, and personality characteristics to the general population.

### **Threats to Internal Validity**

Selection bias may happen when more of one type of person is one group for the study. For example, there may be the difference between the people who returned the questionnaire and the people who did not return the questionnaire. The mortality threat may have occurred when more of one type of person dropped out of the study. For example, those less committed may drop out of a study. The history threat may occur when events occur to participants that do not have a relationship with the independent variable influences the results. In an extended study measuring the effect of coping skills on stress, participants may seek out other means of reducing stress. A regression threat may happen when there is a nonrandom sample from a population.

### **Threats to Construct Validity**

The alpha coefficients for the Ways of Coping Scale were in the range of .61 to .79, and construct validity was expressed as reliability. Some of the alpha coefficients were not acceptable by Nunnally's (1978) criterion of .70. The alpha coefficient for the NEO FFI was 0.91. Thus, the NEO FFI has high construct validity. The alpha coefficient for the Perceived Stress Scale was 0.85. Thus, the Perceived Stress Scale has high construct validity.

### **Ethical Procedures**

The present study conformed to the ethical guidelines for the Protection of Human Subjects set forth by the American Psychological Association (2006) and federal laws (45CFR, Part 46.102;46.103[c]). I obtained agreements to gain access to participants or data and dissertation committee approval in the form of dated signatures. The study was approved by the Walden Institutional Review Board for Ethical Standards in Research (# 07-15-14-0152435) on 9/10/14, and data collection continued until November 2014.

I provided participants with an informed consent agreement form (Appendix F), which explained involvement in the study and the right to confidentiality. I also explained the right to withdraw from participating at any time without negative repercussions or prejudice and gave participants a subject's bill of rights (Appendix G), which explains participants' specific rights and responsibilities. Furthermore, I informed participants that the risks associated with participation would not surpass those of daily professional activities. To protect the anonymity of the participants, all data and individual responses or names were withheld. All information from the participants' files will be in stored in a safe for 5 years and then destroyed.

### **Summary**

The participants included adults over 18-years-old who was direct support caregivers of individuals within the DD/ID population. The purpose of this study was to test the relationship between stress, coping, and personality characteristics among these direct support caregivers. Data were collected using paper and pen format from the

participants. The participants were employed in 24-hour residential settings for individuals who have developmental or intellectual disabilities.

A correlation analysis to test if there was a high correlation between stress and coping in caregivers within the DD/ID population was conducted. A correlation analysis to test if there was a high correlation between stress and personality characteristics as measured by the NEO-Five Factor Personality Inventory-3 also was conducted. A correlation analysis to test if there was a high correlation between coping and personality characteristics among the professional caregiving population of the DD/ID population as measured by the NEO Five Factor Personality Inventory-3 and the Ways of Coping Questionnaire was conducted. The confidentiality of participants was protected.

The results of the data analysis are discussed in Chapter 4.

## Chapter 4: Results

### **Introduction**

The purpose of the quantitative correlational design was to assess whether there is a correlation among stress, coping, and personality characteristics of direct support professional caregivers within the DD/ID population. The research questions examined the correlation between stress and coping, stress and personality characteristics, and coping and personality characteristics using the Ways of Coping Questionnaire, Perceived Stress Scale, and the NEO-Five Factor Personality Inventory-3. The hypotheses predicted: (a) a high correlation between stress and coping in caregivers, (b) certain personality characteristics are associated with high stress levels, (c) caregivers with the personality characteristics agreeableness and openness to experience will utilize better coping skills

The purpose of this chapter was to present the data analysis and the findings. It includes an analysis of the data from the study's three instruments. The first section of this chapter focuses on the data collection procedures . The second section focuses on the results of the collected data. The final section presents a summary of the findings .

### **Data Collection**

I recruited participants from eight 24-hour residential facilities and introduced the study to them during staff meetings. Candidates were given my contact information and asked to contact me. Data collection began in September, 2014 and continued until November, 2014. All 100 of the candidates who contacted me received questionnaires, of which 69 questionnaire packets were received. There was one missing demographic

survey in this packet of 69. The final sample for the hypothesis was 69 and the final sample for the demographic surveys was 68. This number exceeded the minimum sample size of 55, based on a G\*Power computation.

I then met with them individually to explain the study, obtain consent, provide directions for completing the survey instruments, and to give them the packet, which included the demographic questionnaire, the Perceived Stress Scale, the NEO-FFI-3, the Ways of Coping Questionnaire, and my phone number. I intended to meet with the participants individually to fill out the survey instruments, but after the procedures were reviewed, they elected to fill out the survey instruments independently. Once they had completed the survey instruments, they contacted me to pick up the packet.

The target population was adults over 18 years old employed as DSPs. All participants were required to have at least 6 months of paid employment as a DSP. Both genders were invited to participate. Based on the results of the data collected, the majority of participants fell between the ages of 25 and 40 years old. Females representing almost four times as many males. A convenience sample was selected as the appropriate sampling method because it is the most common sample used to study the relationship between variables (Dillman et al., 2002). Thus, the sample was not representative of the entire population of DSPs 18 years old and older; therefore I cannot generalize about the relationship between stress, coping, and personality characteristics among the direct support caregiver to the broader population. The small sample size and data collected at one site is a limitation of the current study. This will be discussed more fully in Chapter 5.

### **Normal Distribution**

The skewness and kurtosis for normal variables (e.g., confrontive coping, agreeableness, accepting responsibility) were within the values range of minus one through plus one. The skewness and kurtosis for nonnormal variables (e.g., distancing, self-controlling, seeking social support, planful problem solving, positive reappraisal) were outside the values range of minus one through plus one. I used logarithmic ( $\log_{10}$ ) transformation to transform nonnormal variables into normal variables. Logarithmic ( $\log_{10}$ ) transformation makes a normal distribution of data.

### **Results**

The demographics of the participant population are presented in Table 1. For the purpose of the current research the demographic survey was intended to capture the characteristics of the sample population. Therefore an assessment of the demographic characteristics and the key variables was not conducted. There was one missing demographic survey from the sample population. This missing value was coded with a number that is not included in the response code. The first demographic question gathered information on the gender of the participants. Females ( $n = 52$ ; 75.4%) were represented almost four times as much as males ( $n = 16$ ; 23.2%) in the sample population. The second demographic question gathered information on the age of the participants. The majority of participants fell within the age range of 25 and 40-years-old ( $n = 28$ ; 40.6%). Information on work experience also was gathered. The majority of the participants fell within the 1–5-year range ( $n = 25$ ; 36.2%) of employment. The demographics data is summarized in Tables 1-3.

Table 1

*Frequency Distribution: Gender*

	<i>N</i>	Percent
Male	16	23.2
Females	52	75.4
Missing	1	1.4
Total	69	100.0

Missing variables were replaced.

Table 2

*Frequency Distribution: Age*

	<i>N</i>	Percent
18–24 years	6	8.7
25–40 years	28	40.6
41–55 years	26	37.7
≥56	8	11.6
Missing	1	1.4
Total	69	100.0

Table 3

*Frequency Distribution: Work Experience*

	<i>N</i>	Percent
6-12 months	5	7.2
1-5 years	25	36.2
6-10 years	23	33.3
11-15 years	6	8.7
16-20 years	6	8.7
≥ 21 years	3	4.3
Missing	1	1.4
Total	69	100.0

**Hypothesis 1**

The first hypothesis predicted there would be a high correlation between stress and coping in caregivers within the DD/ID population. Specifically, I anticipated that the

correlation between stress and coping in caregivers to be strong. I conducted a correlational analysis to evaluate the hypothesis. As shown in Table 4, there was a positive moderate correlation between confrontive coping and stress ( $r = .435, p < .05$ ) while there was a weak positive correlation between stress and distancing ( $r = .255, p < .05$ ), self-controlling ( $r = .249, p < .05$ ), and seeking social support ( $r = .293, p < .05$ ). Thus, the results indicated that as stress increases so does confrontive coping. Likewise, as stress increases so does distancing, self-controlling, and seeking social support but to a lesser extent than confrontive coping as evidenced by the moderate and low correlation. According to Coolican (2009), 1 is a perfect correlation, 0.7–0.9 is a strong correlation, 0.4–0.6 is considered to be a moderate correlation, while a correlation of 0.3–0.1 is considered to be a weak correlation.

The data show that caregivers used confrontive coping, distancing, self-controlling, and seeking social support coping skills to deal with stress. Specifically, confrontive coping style was significant at the  $p < .01$  level whereas distancing, seeking social support, and self-controlling coping skills were significant at the  $p < .05$  level. Based on the results of the current study, the null hypothesis was rejected and Hypothesis 1 was supported. Table 4 shows the correlation between the different coping styles and stress.

Table 4

### Correlations

	Confrontive Coping	Distancing	Self-control	Seeking Social Support	Accepting Responsibility	Escape-Avoidance	Planful Problem Solving	Positive Reappraisal	Stress
Confrontive Coping	1.000	.263*	.232	.238*	.445**	.369**	.060	.100	.435**
Distancing	.263*	1.000	.422**	-.027	.297*	.207	.069	-.131	.255*
Self Controlling	.232	.422**	1.000	.086	.009	.120	.181	.100	.249*
Seeking Social Support	.238*	-.027	.086	1.000	.240*	.041	.118	.311**	.293*
Accepting Responsibility	.445**	.297*	.009	.240*	1.000	.417**	.082	.233	.191
Escape-Avoidance	.369**	.207	.120	.041	.417**	1.000	.059	-.048	.106
Planful Problem Solving	.060	.069	.181	.118	.082	.059	1.000	.339**	.200
Positive Reappraisal	.100	-.131	.100	.311**	.233	-.048	.339**	1.000	.117
Stress	.435**	.255*	.249*	.293*	.191	.106	.200	.117	1.000

\*  $p < .05$ , \*\* $p < .01$

### Hypothesis 2

The second hypothesis predicted that personality characteristics such as neuroticism, extroversion, and conscientiousness would be associated with high stress levels. Specifically, I anticipated that the correlation between stress and personality characteristics in caregivers within the DD/ID population would be strong. To test this hypothesis, I conducted a correlational analysis. As shown in Table 5, analysis indicated there was a strong positive correlation between stress and neuroticism ( $r = .996$ ,  $p < .01$ ). The correlation between stress and conscientiousness was negative ( $r = -.472$ ,  $p < .01$ ) but moderate in strength. There was a weak negative correlation between extraversion and stress ( $r = -.174$ ,  $p < .01$ ). The data imply that caregivers who demonstrate neurotic personality traits are more likely to experience stress than those with personality characteristics such as conscientiousness and extraversion. . The results also indicated that there is a correlation between conscientiousness and extraversion ( $r = .329$ ,  $p < .01$ ).

Based on the results of the current study, Hypothesis 2 was supported by the strong correlation between stress and neuroticism.

Table 5

*Correlation Analysis: Neuroticism, Extraversion, Conscientiousness, Stress*

	Neuroticism	Extraversion	Conscientiousness	Stress
Neuroticism	1.000	-.179	-.479**	.996**
Extraversion	-.179	1.000	.329**	-.174
Conscientiousness	-.479**	.329**	1.000	-.472**
Stress	.996**	-.174	-.472**	1.000

\*\*  $p < .01$

I conducted a multiple regression analysis to further test the hypothesis. The objective was to determine if there was a relationship between variables in order to understand whether personality characteristics such as neuroticism, extroversion, and conscientiousness were associated with high stress levels. The null hypothesis stated that there are no personality characteristics that are associated with increased stress, and analysis indicated that I should reject the null hypothesis ( $p < .05$ ) because neuroticism had a significant impact on stress ( $p < .05$ ). The results of the regression indicated that neuroticism had a significant impact on stress ( $F(3,65) = 2610.162, p < .05, R^2 = .992, R^2_{\text{Adjusted}} = .991$ ). This indicated that 99% of the variance is explained by stress. The analysis shows that neuroticism significantly predicted stress ( $\beta = .998, t(65) = 77.887, p < .05$ ). According to the data, caregivers who had neurotic personality characteristics were significantly more stressed. This result supported the hypothesis that stated that certain personality characteristics are associated with high stress levels; in this case the results indicated that neuroticism was highly correlated with stress. Table 6-8 displays the results of the regression analysis showing that neuroticism was highly related to stress.

The relationship between neuroticism and stress is consistent with previous research findings. Previous research findings also indicate correlation and not causation.

Therefore, based on previous research causation was not explored.

Table 6

*Regression Analysis: Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.996 <sup>a</sup>	.992	.991	1.858323

<sup>a</sup>Predictors: Conscientiousness, Extraversion, Neuroticism

<sup>b</sup>Dependent Variable: Stress

Table 7

*Regression Analysis: ANOVA<sup>a</sup>*

Model		Sum of Squares	df	Mean Square	F	Sig
1	Regression	27041.531	3	9013.844	2610.162	.000b
	Residual	224.469	65	3.453		
	Total	27266.000	68			

<sup>a</sup>Dependent Variable: Stress

<sup>b</sup>Predictors: Conscientiousness, Extraversion, Neuroticism

Table 8

### Correlations

Model	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>		
	B	SE	Beta	T	Sig
1					
(Constant)	-.227	.856		-.265	.792
Neuroticism	.998	.013	.999	77.887	.000*
Extraversion	.003	.012	.003	.258	.797
Conscientiousness	.005	.013	.005	.373	.710

P < .05.

### Hypothesis 3

The third hypothesis predicted that caregivers with the personality characteristics agreeableness and openness to experience would use better coping skills. I conducted a correlational analysis (Table 9) to evaluate the hypothesis and found there was a weak positive correlation between agreeableness and openness to experience ( $r = .380, p < .05$ ); as caregivers became more agreeable they tend to become more open to experiences. Thus, caregivers with the personality characteristics agreeableness and openness to experience used more effective coping skills in this population sample. The data also indicated that found there is a negative correlation between openness and distancing ( $r = -.251, p < .05$ ) and openness and accepting responsibility ( $r = -.268, p < .05$ ) to be negative and weak; as caregivers are more open, they are less likely to distance themselves and accept responsibility. The data also indicated that there was a positive but moderate correlation between confrontive coping and accepting responsibility ( $r = .445, p < 0.5$ ). As caregivers utilize confrontive coping styles they are more able to accept the responsibility of the task or problem at hand. The data further indicated that there is a positive but moderate correlation between confrontive coping and escape-avoidance ( $r =$

.369,  $p < .05$ ) and escape avoidance and accepting responsibility ( $r = .417$ ,  $p < .05$ ). The data indicated that as caregivers confront the stressful situation they also avoid the stressful situation. These variables were not part of the hypothesis but revealed correlations when the data was computed. Based on the results of the study, Hypothesis 3 was supported.

Table 9

*Correlation Analysis: All Traits*

	Agree- ableness	Open- ness	Con- frontive Coping	Distanc -ing	Self Control -ling	Seeking Social Support	Accept -ing Respon s-ibility	Escape- Avoid- ance	Planful Problem Solving	Positive Re- appraisal
Agreeableness	1.000	.380**	-.158	-.094	-.088	-.061	-.195	-.121	.065	-.014
Openness	.380**	1.000	-.102	-.251*	-.162	-.030	-.268*	-.119	.009	-.158
Confrontive Coping	-.158	-.102	1.000	.263*	.232	.238*	.445**	.369**	.060	.100
Distancing	-.094	-.251*	.263*	1.000	.422**	-.027	.297*	.207	.069	-.131
Self Controlling	-.088	-.162	.232	.422**	1.000	.086	.009	.120	.181	.100
Seeking Social Support	-.061	-.030	.238*	-.027	.086	1.000	.240*	.041	.118	.311**
Accepting Responsibility	-.195	-.268*	.445**	.297*	.009	.240*	1.000	.417**	.082	.233
Escape- Avoidance	-.121	-.119	.369**	.207	.120	.041	.417**	1.000	.0	-.048
Planful Problem Solving	.065	.009	.060	.069	.181	.118	.082	.059	1.000	.339**
Positive Reappraisal	-.014	-.158	.100	-.131	.100	.311**	.233	-.048	.339**	1.000

\*\*  $P < .05$ .

Tables 10 through 12 display the mean and standard deviations for the independent variables and the dependent variables. The mean is equal to the sum divided by total number. Standard deviation is a measure of variability about the mean. A low standard deviation shows that the data points are near the average, whereas high standard deviation shows that much variation exists from the average (Creswell, 2009). Table 10 shows confrontive coping (relative score) had a mean of .1002 and standard deviation of .4752, which indicates that the data points were near the average. The relative score

describes the proportion of effort produced for each coping strategy between 0-100. A high score indicated that the person uses that coping strategy more often than others. Standard deviation of .4752 indicates that the data points are near the average. The range of scores falls between .00516 and .19524. Table 11 shows neuroticism (*t*-score) had a mean of 48.32 and standard deviation of 10.068. Standard deviation of 10.068 indicates that the scores are further away from the data points near the average. The range of score falls between 26.96 and 69.68. Table 12 shows stress had a mean of 15.97 and standard deviation of 6.437. Likewise, the standard deviation of 6.437 is further away from the average scores. The range of score falls between 3.096 and 28.884. In summary, the small standard deviation demonstrated that variation did not exist from the average in this population sample.

Table 10

*Descriptive Statistics: WAYS–Relative Score*

	<i>M</i>	<i>SE</i>	<i>SD</i>	Variance
<b>WAYS–Relative Score</b>				
Confrontive coping	.1002	.00572	.04752	.002
Distancing	.1033	.00555	.04611	.002
Self controlling	.1204	.00576	.04782	.002
Seeking social support	.1233	.00725	.06022	.004
Accepting responsibility	.1127	.00612	.05081	.003
Escape-avoidance	.0815	.00544	.04518	.002
Planful problem solving	.1432	.00711	.05910	.003
Positive reappraisal	.1366	.00647	.05376	.003

Table 11

*Descriptive Statistics: NEO-FFI-3–t Score*

	<i>M</i>	<i>SE</i>	<i>SD</i>	<i>Variance</i>
Neuroticism	48.32	1.212	10.068	101.367
Extraversion	47.86	1.222	10.154	103.096
Openness	49.14	1.109	9.209	84.802
Agreeableness	47.62	1.573	13.066	170.709
Conscientiousness	53.38	1.396	11.595	134.444

Table 12

*Descriptive Statistics - PSS*

	<i>M</i>	<i>SE</i>	<i>SD</i>	<i>Variance</i>
Stress	15.97	.775	6.437	41.440

**Summary**

Caregivers with confrontive coping, distancing, self-controlling, and seeking social support coping styles were found to be able to deal with stress more effectively than those who did not demonstrate those strategies. Caregivers who had traits associated with neuroticism were more stressed. Caregivers who had the trait of conscientiousness also were able to deal with stress. Caregivers with the personality characteristics of agreeableness and openness to experience would use better coping skills than those with fewer of those characteristics.

Chapter 5 contains a discussion of the key findings, limitations of the study, recommendations and implications, and a conclusion.

## Chapter 5: Discussion

### **Introduction**

This study was conducted to examine the correlation between stress and coping and personality characteristics of DSP for individuals with DD/ID. DSPs are faced with stress, whether on the job or at home. This stress may affect their ability to handle their work. However, personality characteristics also can influence how individuals cope with stress. This study was designed to fill the gap by exploring the professional caregivers within the DD/ID population. The goal of the study was to investigate the influence of personality characteristics on stress and coping among professional caregivers within the DD/ID population. This chapter contains a discussion of the overall results; it addresses each hypothesis and its implications; it also addresses the study's limitations, future directions, and the potential for social change.

To assess the correlation between variables, I used correlation and regression analyses to determine whether a correlation existed between stress and coping among DSPs for individuals with DD/ID. The results indicated that stress is positively correlated with confrontive coping, distancing, self-controlling, and seeking social support. Coping styles are classified as emotion-focused and problem focused. Confrontive coping, distancing, and self-controlling comprise the emotion-focused coping style whereas seeking social support is related to problem-focused coping. Furthermore, emotion-focused coping styles are better for coping with stress, whereas problem-focused coping styles are better for coping with long-term burdens (Cooper et al., 2007).. The data indicated that stress is positively correlated with neuroticism and negatively correlated

with conscientiousness. The significant higher correlation between stress and neuroticism can lead to long term burden. That is, caregivers who present with the personality style of neuroticism are less able to cope with stress level compared to caregivers who are conscientious. Openness is negatively correlated with distancing and accepting responsibility. Caregivers with distancing coping style are able to manage stress better. Caregivers with the personality style of openness are more able to utilize the coping styles of distancing and accepting responsibilities.

In the next section, I discuss the interpretation of findings followed by the limitations of the study. I then address the implications for social change and make recommendations for future research. The chapter ends with a presentation of conclusions based on the findings.

### **Interpretation of the Findings**

The study focused on the caregivers of individuals with intellectual and developmental disabilities and the caregivers' ability to cope with stress. Caregivers who are more burdened are less able to cope with stress and thus experience burnout and other negative effects faced with the caregiving role (Ekwall & Hallberg, 2007) and not having the support to turn to when faced with stressful situations also contribute to burnout and stress (Grossfield-Schmitz et al. (2010). Specifically, I explored whether personality characteristics influence coping.

Firstly, eligibility for participation was based on the prospective participant obtaining a general equivalency or a high school diploma. The goal was to ensure that the prospective participant is able to read and write at a high school level as the survey

instruments utilized in the study required a high school level of education for comprehension. Data were gathered at the agency which employs the direct support professionals and requires a high school or general equivalency diploma for employment. Thus, it can be inferred that the participants hold at least a high school or general equivalency diploma and are able to read and write at the high school level. This may have affected the level of comprehension when completing the surveys resulting in the current results. Despite the simple instructions for the survey instruments and the survey instruments being normed a sample of high school education level confusion may be possible as the surveys utilized a Likert type scale. This was evident in a review of the raw data which indicated that participants circled responses in a pattern; all of the same responses were selected for the entire scale which may have influenced the results. As indicated in the methods section, the instrument was normed on high school aged education population and the participants had at least a high school level of education which was a requirement for employment within the organization. The researcher would have been able to clarify any misunderstanding of the participants when they were completing the survey instruments if the survey instruments were completed in the researcher's presence.

Secondly the participant may have chosen to answer in a way that they perceive to be positive. Prior to the study, the participants were informed that the surveys are anonymous and that the raw data will not be shared by their employing agency. Nevertheless, some participants may have answered the question on the survey instruments in a manner that highlight their employing agency in a positive manner. For

instance, if the participant believes that answering with a higher score will result in a positive likeness, he or she will answer all the questions in such manner thereby skewing the results.

Another reason for obtaining these particular results may be due to the participants electing to complete the questionnaire independent of the researcher. Initially, it was proposed that the researcher will provide the directions to the participant and afterwards each participant will complete the questionnaire. As the participants elected to complete the questionnaire independently, the researcher may not have been able to clarify any queries by the participant which may have led to the wrong interpretation of the standardized instructions, thus, ultimately skewing the results of the instruments and the study at large.

A final reason for obtaining the particular results in the current study may be the participants' emotional wellbeing during the time of completion of the survey instruments. Depending on the complications in his/her personal life or employment, questions can be interpreted in a certain manner which can elicit certain results. Lastly, there may have been discussion amongst other staff regarding the research and survey instruments as well as completion of the surveys amongst staff. The discussion may have also impacted the manner in which the questions are interpreted and influenced by their team members.

The research questions and hypotheses guided the data collection and analysis of the study. Previous studies have focused on single variables such as stress and coping related to informal caregivers and professional caregivers in the medical field. However,

research has been lacking in the exploration of personality characteristics of professional caregivers and their ability to cope with stress. This study sought to identify the personality characteristics that enable an individual to be able to cope with stress. The identification of the desirable personality characteristics will assist employers in the identification of the best candidates for employment in the field thereby reducing high turnover rates and increasing the retention of professional caregivers.

This study was guided by Lazarus and Folkman's (1984) theory of the transactional model of stress and coping. Often caregivers are faced with stressors that are a direct result of caring for others, and Grabel and Adabbo (2011) reported that the transactional model of stress and coping can explain the relationship between caregivers' stress and their coping behaviors. The management of stress is mediated by an individual's coping strategies (Goh et al., 2010). Overall, the results of this study are consistent with those of MacKay and Pakenam (2011), Grabel and Adabbo (2011) and Goh et al. (2010) who found a high correlation between stress and coping in caregivers.

### **Hypothesis 1**

Hypothesis 1 stated that there would be a high correlation between stress and coping in caregivers within the DD/ID population. The results indicate that there is a moderate positive correlation between confrontive coping and stress; however, there is a weak but positive correlation between stress and distancing, self-controlling, and seeking social support. Caregivers with confrontive coping style are better able to cope with stress than those with distancing, self-controlling, or seeking social support styles. The data indicate that individuals with confrontive coping, distancing, self-controlling, and seeking

social support qualities are better able to cope with stress than individuals with the other coping skills measured in this study. Specifically, confrontive coping may be a better coping style because the individual is working through the stressful situation on an individual basis whereas individuals with distancing, self-controlling, or social support seeking skills are not addressing the situation aggressively but rather are seeking support for the stress from other sources.

These findings are consistent with those of Gold et al. (2008), who found that caregivers with higher level of social support are able to cope better with the stress and challenges associated with their caregiving role. Thus, they are more cognizant which an asset in the ability to cope. Furthermore, the findings are similar MacKay and Pakenam's (2011) longitudinal study in which they used the Lazarus and Folkman (1984) model of stress and coping theory as a theoretical foundation. MacKay and Pakenam found that caregivers are able to deal with stress as a result of social support, better coping skills, and higher controllability and challenge appraisal. Their study also showed that the stress and coping model was valuable for assisting in caregiver adjustment through guidance and identification of risk and protective factors. Although the aforementioned studies support this study to a degree by revealing that social support is a moderator for coping, confrontive coping was found to be a better coping style when compared to the other styles assessed in this study; this finding was not supported by Gold et al. and MacKay and Pakenam.

## **Hypothesis 2**

Hypothesis 2 predicted that personality characteristics such as neuroticism, extroversion, and conscientiousness are associated with high stress levels. McCrae and Costa (1989) defined neuroticism as the tendency to be more susceptible to psychological distress. Caregivers who present more neurotic personality traits may be highly stressed with the job demands and less likely to cope with the stress. The results indicate that the correlation between stress and neuroticism is positive and strong. Conversely, there is a moderate negative correlation between conscientiousness and stress and a weak negative correlation between stress and extraversion.

The data indicate that caregivers who are more conscientious are better able to cope with stress. Certainly, individuals who are conscientious spend more time on the task to ensure that it is completed. These individuals may only focus on the task at hand and additional demands at work. Therefore a conscientious individual may be less stressed from the high degree of job demand because they are able to focus on completing the required tasks rather than being distracted by emotions. Conversely, neurotic individuals may be highly stressed because they have difficulty managing their emotions and often feel negative and guilty, which affects their ability to cope. Similarly, Narumoto et al. (2008) found that neuroticism was correlated with high burnout rates.

The relationships between extraversion and coping also raise questions. Specifically, extraverts are positive and cheerful (McCrae & Costa, 1989); therefore they express themselves more so than individuals who are neurotic and conscientious. When faced with stress and job demand, extraverts may express poor coping skills more openly

than individuals with neurotic or conscientious coping skills. This supposition is supported by Lockenhoff et al., (2011) who examined the association among caregivers' personality traits and subjective health. Lockenhoff et al. (2011) found that caregiver strain mediated the correlation between physical health and personality characteristics whereas openness to experience and conscientiousness were correlated with subjective mental health. In the present study, stress is positively correlated with neuroticism and negatively correlated with conscientiousness. Conversely, Lockenhoff et al. (2011) found that physical and mental health was positively correlated with neuroticism and negatively correlated with conscientiousness and openness to experience and conscientiousness were correlated with subjective mental health.

In summary, neurotic individuals are fairly negative in their outlook; as such their health suffers. In this study, neuroticism was highly correlated with stress—a finding corroborated by Koermer and Kenyon (2007) who found that neurotic and conscientious individuals experienced higher levels of depressive symptoms while individuals with high extroversion personality traits experienced less depressive symptomology. Similarly, conscientiousness and agreeableness have a negative correlation with parenting stress and child diagnosis (Perez Algorta et al., 2014). Similarly individuals who are conscientious are also affected by stress. On the other hand, extroverts are slightly less affected by stress.

### **Hypothesis 3**

Hypothesis 3 stated that caregivers with the personality traits of agreeableness and openness to experience would utilize better coping skills. In the study, the correlation

between openness and distancing and accepting responsibility is negative. Caregivers with the personality characteristics of agreeableness and openness to experience used more effective coping skills. In this study, openness is negatively correlated with distancing and accepting responsibility. Chappell and Dujela (2009) examined the effects of personality characteristics on coping and found the personality characteristic of openness to experience was a predictor of problem-focused coping strategies. The results of this study are inconsistent with the findings of Chappell and Dujela.

Furthermore, Lockenhoff et al. (2011) reported that self-efficacy and caregiver strain mediated the effects of subjective health on personality characteristics including agreeableness. Possibly, an individual's self-perception determines how coping strategies are used. In this study, the results indicated that caregivers with the personality trait of agreeableness used more effective coping skills. As such, it can be inferred that the caregivers may have viewed themselves positively as a result of the use of more effective coping skills. The findings of this research are consistent with the findings of Lockenhoff et al.

### **Limitations of the Study**

This study sought to examine the relationship between stress, coping, and personality characteristics among the DSPs in the DD/ID population. In this section, I explore limitations associated with the study. The study limitations are primarily associated with the research methodology.

The main limitations are related to sampling and generalization. I used a convenience sample obtained from one organization, and I selected professional DSPs

over 18 years old. The recommended sample size of 55 was based on the computations of the G\*Power statistical program, and 69 individuals participated in the study. Although the sample size exceeded the minimum recommended, it is still small and results in poor external validity. Selection bias might also be a threat to internal validity. There may be a difference between those who agreed to participate and those who did not.

The eligibility for participation required the participant to have a general equivalency or high school diploma. The purpose of this selection criterion was to ensure that the participant was able to read and write at a high school level because the survey instruments required a high school level of education for comprehension and completion. However, despite the instructions for the survey instruments, confusion may have been possible because the surveys used a Likert type scale. I originally had planned to mitigate any difficulty with the comprehension of the instruments by meeting personally with each participant as they completed the instruments. However, the participants elected to complete the questionnaire independently. This decision prevented me from being able to clarify any queries, which may have led to varying interpretations of the standardized instructions and a skew of the results. There may have been discussion among the staff regarding the research and survey instruments which . may have impacted the manner the questions were interpreted and answers may have been influenced by team members. Moreover, because data were collected using four self-reported questionnaires, the self-reporting might result in individuals who rate the survey items too highly.

Thirdly, participants may have chosen to answer in a way they perceived to be positive. Thus, some participants may have answered the question on the survey

instruments in a manner that positioned the caregiver and the employing agency in a positive manner thereby skewing the results. The results also may have been affected by the participants' emotional wellbeing at the time of completion of the survey instruments. Depending on the contexts of an individual's personal life or employment, questions could have been interpreted in a ways that would elicit certain results. Similarly, because the participants were mostly females, they have may have answered the questions based on empathy or nurture rather than being objective. Women have been demonstrated to be more empathetic than men (Mestre, Samper, Frías, & Tur, 2009). As a result, the findings of the study may be biased toward a specific population, which makes any conclusions incomplete and nongeneralizable to the field. Given these limitations, I suggest the findings should not be generalized to the larger population of professional caregivers.

Reliability and construct validity is another limitation. The Alpha Coefficients for the Ways of Coping Questionnaire were in the range of .61 to .79 and the alpha coefficient for the NEO FFI was 0.91. Thus, the NEO FFI has high construct validity. The Perceived Stress Scale-10 alpha coefficient was .85 indicating high construct validity. Most of the alpha coefficients were acceptable by Nunnally's (1978) criterion of .70. A comparison of the three scales revealed that the Ways of Coping Questionnaire had the lowest but acceptable construct validity. Each of the survey instruments used in the study meets the criteria for acceptable construct validity and the results of the study indicated that the surveys measured the projected construct.

The current study did not explore the correlation between the demographic characteristics and the key variables. The exploration of this correlation would have

provided some insight into how age, gender, and work experience moderates stress, coping, and personality characteristics.

## **Implications**

### **Positive Social Change**

This study has potential impact for positive social change because it identifies the relationship between stress, coping, and personality characteristics among caregivers of individuals who have developmental or intellectual disabilities. The study revealed that individuals with certain personality characteristics are better able to cope with stress; therefore, the results can be used to provide employers with insight about the needed personality traits of prospective caregivers. The employers can screen potential employees during the interview process to rule out those candidates with the less desirable personality characteristics, which can lead to worker stabilization within the organization. Additionally the information can help employers foster a relationship of long term employment within the target population. Moreover, the findings can help administrators gain a better understanding of the caregiver retention issue. The results can provide insights into why caregivers leave and be used to guide program implementation and improvements to encourage caregiver long-term employment.

The results of the study are more significant for broadly understanding the social environments in which caregivers cope with stress. Understanding the stress caregivers experience and what strategies they use to cope with stress can lead to organizations and a society that are more supportive of individuals within the caregiver role. Organizations can assist caregivers who have difficulty with coping by implementing programs and

social awareness of the presenting problems. On a larger perspective, the identification of better coping skills and personality characteristics that can cope better with stress is applicable to a number of different industries and particularly to the healthcare and human service industries that provides caregiving as a service. This increased awareness could lead to caregivers being treated with more respect, which would contribute to a more socially just society.

### **Theoretical Implications**

Lazarus and Folkman's (1984) theory of the transactional model of stress and coping guided the study design and analysis. Often caregivers are faced with many stressors, which is a direct result of caring for others. Grabel and Adabbo (2011) reported that the transactional model of stress and coping can explain the relationship between caregivers' stress and their coping behaviors. In this study, stress is positively correlated with confrontive coping, distancing, self-controlling, and seeking social support. Stress also is positively correlated with neuroticism. However, stress is negatively correlated with conscientiousness. Moreover, openness is negatively correlated with distancing and accepting responsibility. The results from the study imply that caregivers use coping strategies to deal with the stress of caring for individuals with DD/ID.

### **Methodological Implications**

The study used a correlational design. As the objective of this study was to examine the relationship between stress, coping, and personality characteristics of direct support professional caregivers of individuals with DD/ID, the correlational design answered the three hypotheses by measuring the correlation between variables. The

results from the study imply that correlation and regression analyses are appropriate tools for assessing the correlation between the variables. The strength of the study was that the method was strong. The weakness of the study was that the sample was small.

### **Recommendations**

There are few empirical studies that measured the relationship between personality characteristics and professional caregiver stress and coping among those who care for the DD/ID population. In response to the lack of research into this area, this study investigated the relationship between personality characteristics and professional caregiver stress and coping among those who care for the DD/ID population. Using the results of the research, I present recommendations for future research and recommendations for practice. The subsections on recommendations for practice include suggestions for caregivers and a separate set of suggestions for leaders.

#### **Recommendations for Future Research**

Additional quantitative research that includes controlling for demographic impacts such as gender, age, and work experience as covariates is recommended. This is important to get a more representative sample and results. A larger sample size would help to draw clearer conclusions about the relationship between personality characteristics and professional caregiver stress and coping among those who care for the DD/ID population. A longitudinal research design to examine causal effects would provide additional information such as changes in coping skills and management of stress and the effect of personality characteristics on coping.

An exploration into the correlation between the personality characteristics of professional caregivers would also provide insight into desirable characteristics of caregivers. This is important to the human service field because it can create a template for organizations who utilize during the hiring process. The selection of the most appropriate employees will ultimately lead to stabilization within the field.

A qualitative study focusing on the lived experiences of the direct support professional caregivers would provide a different perspective. A qualitative study that includes the experiences of the formal direct support professional caregivers would help determine how caregivers could effectively cope with stress. Findings developed from the lived experiences of caregivers could provide additional insights into the stresses faced and how caregivers manage those stresses.

Expanding the study to include a wider range of participants would also be beneficial. For example, the study included an examination of stress and coping among caregivers in the workplace, but the participant sample did not capture the responses of immigrant caregivers, female caregivers, or minority caregivers. Therefore, another area of exploration is a qualitative study that includes the lived experiences of the different population groups who make up a majority of caregivers, and a quantitative study that examines stress and coping within these different populations of caregivers would be informative. An international quantitative study that examines the impact of coping on caregivers' depression at different health organizations would also further understandings of the relationship between stress and coping skills. Specifically, the expanded research could be used to develop an instrument to improve coping skills.

Equally important is the need for a quantitative study that examines the personality characteristics that enable an individual to better able to cope with stress. These include characteristics such as conscientiousness and openness to experience. The goal would be to further understanding of the coping processes used by caregivers. Likewise, exploring the personality characteristics that are indicative of individuals less able to cope with stress would contribute to the development of programs to address caregiver professional development support.

### **Recommendations for Practice**

There is a significant relationship between stress, coping, and personality characteristics of direct support professional caregivers of individuals with DD/ID. It is imperative that caregivers understand how to manage their stress and develop relevant coping strategies. To address these concerns, I recommend that caregivers use the results of this study to assist with taking the following actions: (a) Use confrontive coping, distancing, self-controlling, and seeking social support strategies to manage stress. (b) Develop characteristics of conscientiousness and agreeableness to manage stress. Programs to help caregivers develop these traits should be offered by organizational leaders.

Furthermore, leaders of healthcare and human service organizations should have good relationships with caregivers in an effort to stabilize the workforce and increase retention. It is imperative that human service and health care leaders understand how to develop relevant strategies to manage the relationship between caregiver stress, coping, and personality characteristics. Based on the findings from this study, I recommend that

leaders take the following actions: (a) Evaluate caregivers' coping strategies, (b) Develop training courses that help caregivers understand stress and develop coping strategies necessary to manage stress, (c) Examine how they can help caregivers cope with stress, (d) Develop a tool for evaluating coping and personality traits, and (e) Ensure that caregivers possess the coping strategy of stress.

### **Conclusions**

The study posed three research questions and provided information on the relationship between stress, coping, and personality characteristics of direct support professional caregivers of individuals with developmental disability/intellectual disability. Overall, the findings of the study are consistent with the existing literature.

In this study, stress is positively correlated with confrontive coping, distancing, self-controlling, and seeking social support. This finding supports the work of MacKay and Pakenam (2011) who found there was a high correlation between stress and coping in caregivers. In this study, stress also is positively correlated with neuroticism and negatively correlated with conscientiousness. This finding supports the results of Lockenhoff et al.'s (2011) study that found stress was positively correlated with neuroticism and negatively associated with conscientiousness. In this study, openness is negatively correlated with distancing and accepting responsibility. This finding does not support Chappell and Dujela's results (2009) that indicated the personality characteristic of openness to experience was a predictor of problem-focused coping strategies. In sum, the findings from this study indicate that stress is positively correlated with coping

strategies (i.e., confrontive coping, distancing, self-controlling, and seeking social support) and neuroticism.

The goal of the study was to identify the personality characteristics that help an individual be better able to cope with stress. The findings of the study can be used to develop programs to assist caregivers to cope with stress and develop a screening tool to assess personality traits and coping skills during the hiring phase. Matching the employee with the desired skills needed for caregiving will ultimately lead to worker retention and stabilization within the workforce.

## References

- Ackerman, P. L. & Kanfer, R. (2009). Test length and cognitive fatigue: An empirical examination of effects on performance and test-taker reactions. *Journal of Experimental Psychology: Applied*, *15*, 163–181. doi:10.1037/a0015719
- Aiken, S. S., West, S. G., & Pitts, S. C. (2003). Multiple linear regression. In I. B. Weiner (Ed.), *Handbook of psychology* (Vol. 4, pp. 481–507). Hoboken, NJ: John Wiley & Sons.
- American Psychological Association. (2006). *Ethical principles of psychologists and code of conduct*. Washington, DC: Author.
- Arber, S. & Venn, S. (2011). Caregiving at night: Understanding the impact on careers. *Journal of Aging Studies*, *25*(2), 155–165. doi:10.1016/j.jaging.2010.08.020
- Barbosa, A., Figuerredo, D., Sousa, L., Demain, S. (2011). Coping with the caregiver role: differences between primary and secondary caregivers of dependent elderly people. *Aging and Mental Health*, *15*(4), 490–499.  
doi:10.1080/13607863.2010.543660
- Boekhorst, S., Willemse, B., Depla, M. F. I. A., Eefsting, J. A., & Pot, A. M. (2008). Working in group living homes for older people with dementia: The effects on job satisfaction and burnout and the role of job characteristics. *International Psychogeriatrics*, *20*(5), 927-940. doi:10.1017/S1041610208007291
- Bonde, J. P. E. (2008). Psychosocial factors at work and risk of depression: A systematic review of the epidemiological evidence. *Occupational & Environmental Medicine*, *65*, 438–445. doi:10.1136/oem.2007.038430

- Brazil, K., Brainbridge, D., Rodriguez, C. (2010). The stress process in palliative cancer care: A qualitative study on informal caregiving and its implication for the delivery of care. *Journal of American Hospice and Palliative Medicine*, 27(2), 111–116. doi:10.1177/1049909109350176
- Buchanan, R., Radin, D., & Huang, C. (2010). Burden among male caregivers assisting people with multiple sclerosis. *Gender Medicine*, 7(6), 637–646. doi:10.1016/j.genm.2010.11.009
- Butterworth, P., Pymont, C., Rodgers, B., Windsor, T. D., & Anstey, K. J. (2010). Factors that explain the poorer mental health of caregiver: results from a community survey of older Australians. *The Australian and New Zealand Journal of Psychiatry*, 44(7), 616–24. doi:10.3109/00048671003620202.
- Carver, C. S. & Connor-Smith, J. (2010). Personality and coping. *The Annual Review of Psychology*, 61, 679–704. doi:10.1146/annurev.psych.093008.100352
- Chappell, N. L. & Dejuela, C. (2009). Caregivers—who copes who? *International Journal of Aging and Human Development*, 69(3), 221-244. doi:10.2190/AG.69.3.d
- Chun, M., Knight, G., & Young, G. (2007). Differences in stress and coping models of emotional distress among Korean, Korean-American, and White-American caregivers. *Aging and Mental Health*, 11(1), 20–29. doi:10.1080/13607860600736232
- Cocco, E. (2010). How much is geriatric caregivers burnout caring-specific? Questions from a questionnaire survey. *Clinical Practice and Epidemiology in Mental*

*Health*, 6, 66–71. Retrieved from

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2936011/>

Cohen, S., Kamarck, T., Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24, 385-396. Retrieved from <http://www.psy.cmu.edu/~scohen/globalmeas83.pdf>

Cohen, S. & Janicki Deverts, D. (2012). Who's stressed? Distributions of psychological stress in the United States in probability sample from 1983, 2006, and 2009. *Journal of Applied Social Psychology*, 46(6), 1320–1334. doi:10.1111/j.1559-1816.2012.00900.x

Coolican, H. (2009). *Research methods and statistics in psychology*. (5<sup>th</sup> ed). London, England: Hodder Education.

Coomber, B. & Barriball, K. L. (2007). Impact of job satisfaction components on the intent to leave and turnover for hospital-based nurses: A review of the research literature. *International Journal of Nursing Studies*, 44(2), 297–314. Retrieved from [http://www.journalofnursingstudies.com/article/S0020-7489\(06\)00066-6/abstract](http://www.journalofnursingstudies.com/article/S0020-7489(06)00066-6/abstract)

Cooper, C., Katona, C., Orrell, M., & Livingston, G. (2008). Coping strategies, anxiety and depression in caregivers of people with Alzheimer's disease. *International Journal of Geriatric Psychiatry*, 23, 929–936. doi:10.1002/gps.2007

Costa, P. T. & McCrae, R. R. (1992). Four ways five factors are basic. *Person Individual Differences*, 13(6), 653–665. Retrieved from <https://scholar.google.com/citations?user=nZKof74AAAAJ&hl=en>

- Costa, P. T. & McCrae, R. R. (2004). A contemplated revision of the NEO-five factor inventory. *Personality and Individual Differences* (36), 587-596.  
doi:10.1016/S0191-8869(03)00118-1
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches*. Los Angeles, CA: Sage.
- Dewe, P. (1991). Primary appraisal, secondary appraisal and coping: Their role in stressful work encounters. *Journal of Occupational Psychology*, 64, 331–351.  
Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.2044-8325.1991.tb00564.x/abstract>
- Dillman, D. A., Eltinge, J. L., Groves, R. M., & Little, R. J. A. (2002). Survey response in design, data collection, and analysis. In D. A. Dillman, J. L. Eltinge, R. M. Groves, & R. J. A. Little (Eds.). *Survey nonresponse* (pp. 3–26). New York, NY: John Wiley and Sons, Inc.
- Dilworth-Anderson, P., & Williams, S. (2004). Caregiving and stress. In N. Anderson (Ed.), *Encyclopedia of health and behavior* (pp. 159–163). Thousand Oaks, CA: Sage Publications, Inc. doi:10.4135/9781412952576.n49
- Eastwood, C. & Ecklund, K. (2008). Compassion fatigue risk and self-care practices among residential treatment center childcare workers. *Residential Treatment for Children and Youth*, 25(2), 103–122. doi:10.1080/08865710802309972
- Eberhart, N. K. & Hammen, C. L. (2010). Interpersonal style, stress and depression: An examination of the transactional and the diathesis-stress models. *Journal of Social Clinical Psychology*, 29(1), 23–38. doi:10.1521/jscp.2010.29.1.23

- Ekwall, A. K. & Hallberg, I. R. (2007). The association between caregiving satisfaction, difficulties and coping among older family caregivers. *Journal of Clinical Nursing, 16*, 832–844. doi:10.1111/j.1365-2702.2006.01382.x
- Erdfelder, E., Faul, F., & Buchner, A. (1996). GPOWER: A general power analysis program. *Behavior Research Methods, Instruments & Computers, 28*, 1–11. doi:10.3758/BF03203630
- Erdfelder, E., Faul, F., & Buchner, A. (2005). Power analysis for categorical methods. In B. S. Everitt & D. C. Howell (Eds.), *Encyclopedia of statistics in behavioral science* (pp. 1565–1570). Chichester, UK: John Wiley & Sons, Ltd.
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175–191. doi:10.3758/BF03193146
- Feldman, M., McDonald, L., Serbin, L., Stack, D., Secco, M., & Yu, C. (2007). Predictors of depressive symptoms in primary caregivers of young children with or at risk for developmental delay. *Journal Of Intellectual Disability Research, 51*(8), 606–619. doi:10.1111/j.1365-2788.2006.00941.x
- Ferrara, M., Langiano, E., Di Brango, T., De Vito, E., Di Cioccio, L., & Bauco, C. (2008). Prevalence of stress, anxiety and depression in with Alzheimer caregivers. *Health And Quality Of Life Outcomes, 6*. doi:10.1186/1477-7525-6-93
- Fitzel, A. & Pakenham, K. I (2009). Application of a stress and coping model to positive and negative adjustment outcomes in colorectal cancer caregiving. *Psycho-Oncology, 19*, 1171–1178. doi:10.1002/pon.1666.

- Folkman, S., Lazarus, R. S., Dunkel-Schetter, C., DeLongis, A., & Gruen, R. (1986). The dynamics of a stressful encounter: Cognitive appraisal, coping and encounter outcomes. *Journal of Personality and Social Psychology*, 50, 992-1003. Retrieved from [http://health.psych.ucla.edu/CDS/pubs/1986%20FolkmanLazarus\\_Dynamics%20of%20a.pdf](http://health.psych.ucla.edu/CDS/pubs/1986%20FolkmanLazarus_Dynamics%20of%20a.pdf)
- Folkman, S., & Lazarus, R. S. (1988). *Manual for the Ways of coping questionnaire*. Palo Alto, CA: Consulting Psychologists Press.
- Gaugler, J. E. & Kane, R. L. (2007). Families and assisted living. *Gerontologist*, 4 (1), 83-99.
- Gaugler, J. E., Mittleman, M. S., Hepburn, K., & Newcomer, R. (2010). *Clinically significant changes in burden following depression among dementia caregivers following nursing home admission*. Retrieved from <http://www.biomedcentral.com/1741-7015/8/85>.
- Gerkenmeyer, J. E., Perkins, S. M., Scott, E. L., & Wu, J. (2008). Depressive symptoms among primary caregivers of children with mental needs: Mediating and moderating variables. *Archives of Psychiatric Nursing*, 22(3), 135–146. doi:10.1016/j.apnu.2007.06.016
- Goh, Y., W., Sawang, S., & Oei, T. P. S. (2010). The revised transactional model (RTM) of occupational stress and coping: An improved process approach. *The Australian and New Zealand Journal of Organisational Psychology*, 3, 13–20. doi:10.1375/ajop.3.1.13

- Gold, J. I., Treadwell, M., Weismann, L., & Vichinsky, E. (2008). An expanded transactional stress and coping model for siblings of children with sickle cell disease: Family functioning and sibling coping, self-efficacy and perceived social support. *Child: Care, Health, and Development*, 34(4), 491–502. doi:10.1111/j.1365-2214.2008.00810.x
- Goldbasi, Z., Kelleci, M., Dogan, S. (2008). Relationships between coping strategies, individual characteristics and job satisfaction in a sample of hospital nurses: Cross-sectional questionnaire survey. *International Journal of Nursing*, 45(12), 1800–1806. doi:10.1016/j.ijnurstu.2008.06.009
- Grabel, E. & Adabbo, R. (2011). Perceived burden of informal caregivers of a chronically ill older family member. *The Journal of Gerontopsychology and Geriatric Psychiatry*, 24(3), 143–154. doi:10.1024/1662-9647/a000042
- Gray-Stanley, J. A., Muramatsu, N. N., Heller, T. T., Hughes, S. S., Johnson, T. & Ramirez-Valles, J. J. (2010). Work stress and depression among direct support professionals: The role of work support and locus of control. *Journal of Intellectual Disability Research*, 54(8), 749–761. doi:10.1111/j.1365-2788.2010.01303.x
- Grossfeld-Schmitz, M., Donath, C., Holle, R., Lautherberg, J., Ruckdaeschel, S., Mehlig, H., Grabel, E. (2010). Counselor contact dementia caregivers—Predictors of utilization in a longitudinal study, *BMG Geriatrics*, 10–24. Retrieved from: <http://www.biomedcentral.com/1471-2318/10/24>.

- Hewitt, A. & Larson, S. A. (2007). The direct support workforce in community supports to individuals with developmental disabilities: issues, implications and promising practices. *Mental retardation and Developmental Disabilities Research Review*, *13*, 178–187. doi:10.1002/mrdd.20151
- Hewitt, A., Larson, S., Edelstein, S. Seavey, D., Hoge, M. A., & Morris, J. (2008). A synthesis of direct service workforce demographics and challenges across intellectual/ developmental disabilities, aging, physical disabilities, and behavioral health. Retrieved from <http://www.dswresourcecenter.org>
- Jian-Feng, Y. (2010). Cross-cultural personality assessment: the revised neo personality inventory in China. *Social Behavior and Personality: an international journal*, Volume 38, Number 8, 2010, pp. 1097-1104(8). doi:10.2224/sbp.2010.38.8.1097
- John, O. P., Robbins, R. W. & Pervin, L. A. (Eds.) (2008). *Handbook of personality: Theory and research* (3rd ed.). New York, NY: Guilford.
- Kilbourn K. M., Costenaro, A., Madore, S., Deroche, K., Anderson, D., Keech, T., Kutner J.S. (2011). Feasibility of a telephone-based counseling program for informal caregivers of hospice patients. *Journal of Palliative Medicine*, *14*(1), 1200–1205. doi:10.1089/jpm.2011.0186
- Kim, J. H., Knight, B. G., & Longmire, C. V. (2007). The role of familism in stress and coping processes among African American and White dementia caregivers: Effects on mental and physical health. *Health Psychology*, *26*(5), 564–576. doi: 10.1037/0278-6133.26.5.564

- Kim, Y. & Schultz, R. (2008). Family caregivers' strains: Comparative analysis of cancer caregiving with dementia, diabetes, and frail, elderly caregiving. *Journal of Aging and Health, 20*, 483–503. doi:10.1177/0898264308317533
- Koermer, S. S. & Kenyon, D. Y. B. (2007). Understating the “good days” and the “bad days.” Emotional and physical reactivity among caregivers for elder relatives. *Family Relations, 56*, 1–11. doi:10.1111/j.1741-3729.2007.00435.x.
- Lee, H. & Singh, J. (2010). Appraisals, burnout and outcomes in informal caregiving. *Asian Nursing Research, 4*(1), 32–44. doi:10.1016/S1976-1317(10)60004-7.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- Lazarus, R. S. & Folkman, S. (1986). Cognitive theories of stress and the issue of circularity. In M. H. Appley and R. Turmbull (Eds.), *Perspectives in interactional psychology* (pp. 287-327). New York, NY: Plenum.
- Lazarus, R. S. & Folkman, S. (1998). *Fifty years of research and theory by R. S. Lazarus: An analysis of historical and potential issues*. Mahawh: NJ. Lawrence Erlbaum Associates.
- Lin, J. S., Probst, J. C., & Hsu, Y. C. (2010). Depression among female psychiatric nurses in southern Taiwan: main and moderating effects of job stress, coping behavior and social support. *Journal of Clinical Nursing, 19*, 2342–2354. doi:10.1111/j.1365-2702.2010.03216.x
- Lockenhoff, C. E., Duberstein, P. R., Friedman, B., & Costa Jr., P. T. (2011). Five-factor personality traits and subjective health among caregivers: the role of caregiver

strain and self-efficacy. *Psychology and Aging*, 26(3), 592–604.

doi:10.1037/a0022209

Macbeth, J. M. (2011). *Commitment, capacity and culture: Solution for the direct support workforce crisis*. Retrieved from

[http://www.nysacra.org/nysacra/pdf/Commitment\\_Capacity\\_Culture.pdf](http://www.nysacra.org/nysacra/pdf/Commitment_Capacity_Culture.pdf)

McCrae, R. R., & Costa, P. T. Jr. (2004). A contemplated revision of the NEO five-factor inventory. *Personality and Individual Differences*, 36, (587–596) Retrieved from

[http://cda.psych.uiuc.edu/multivariate\\_fall\\_2013/neo\\_mccrae\\_costa.pdf](http://cda.psych.uiuc.edu/multivariate_fall_2013/neo_mccrae_costa.pdf)

McCrae, R. R., & Costa, P. T., Jr. (2010). *Professional manual for the NEO Inventories: NEO-PI-3, NEO-PI-R, and NEO-FFI-3*. Odessa, FL: Psychological Assessment Resources.

McCrae, R. R., Costa, P. T. Jr., Del Pilar, G. H., Rolland, J. P., & Parker, W. D. (1998).

Cross-Cultural Assessment of the Five-Factor Model: The Revised NEO

Personality Inventory. *Journal of Cross-Cultural Psychology*, 29, 171–188.

doi:10.1177/0022022198291009

McCrae, R. R., Costa, P. T. Jr., Terracciano, A., Parker, W. W., Mills, C. J., De Fruyt, F.,

& Mervielde, I. (2002). Personality trait development from 12 to 18:

Longitudinal, cross sectional, and cross-cultural analyses. *Journal of Personality*

*and Social Psychology*, 83, 1456–1468. doi:10.1037//0022-3514.83.6.1456

MacKay, C. & Pakenham, K. I. (2011). Identification of stress and coping risk and

protective factors associated with changes in adjustment to caring for an adult

with mental illness. *Journal of Clinical Psychology*, 67(10), 1064–1079.

doi:10.1002/jclp.20829

Matthews, G. & Campbell, S. E. (2009). Sustained performance under overload: personality and individual differences in stress and coping. *Theoretical Issues in Ergonomics Science*, 10(5), 417–442. doi:10.1080/14639220903106395

Mestre, M. V., Samper, P., Frías, M. D., & Tur, A. M. (2009). Are women more empathetic than men? A longitudinal study in adolescence. *The Spanish Journal of Psychology*, 12(01), 76–83. Retrieved from <http://www.redalyc.org/pdf/172/17213005008.pdf>

Miodrap, N. & Hodapp, R. M. (2010). Chronic stress and health among parents of children with intellectual and developmental disabilities. *Current Opinion in Psychiatry*, 23(5), 407–411. doi:10.1097/YCO.0b013e32833a8796

Mittal, V., Rosen, J., & Leana, C. (2009). A dual-driver model of retention and turnover in the direct care workforce. *Gerontologist*, 49(5), 623–634. doi:10.1093/geront/gnp054

Monin, J. K., Martire, L. M., Schulz, R., & Clark, M. S. (2009). Willingness to express emotions to caregiving spouses. *Emotion*, 9(1), 101–106. doi:10.1037/a0013732.

Myers, L. S., Glenn, G., Guarino, A. J. (2012). *Applied multivariate research, design and Interpretation* (2<sup>nd</sup> ed.). Thousand Oaks, CA. Sage Publication Inc.

Narumoto, J., Nakamura, K., Kitabayashi, Y., Shibata, K., Nakamae, T., & Fukui, K. (2008). Relationships among burnout, coping style and personality: Study of

Japanese professional caregivers for elderly. *Psychiatry & Clinical Neurosciences*, 62, 174-176. doi:10.1111/j.1440-1819.2008.01751.x

Netterstrom, B., Conrad, N., Bech, P., Fink, P., Olsen, O., Regulies, R., Stansfeld, S.

(2008). The relation between work-related psychosocial factors and the development of depression. *Oxford Journal*, 30(1), 118–132.

doi:10.1093/epirev/mxn004

Nye, C. D., Roberts, B. W., Saucier, G., & Zhou, X. Y. (2008). Testing the measurement

of equivalence of personality adjective items across cultures. *Journal of Research in Personality*, 42(6), 1524–1536. doi:10.1016/j.jrp.2008.07.004

Nunnally, C. (1978). *Psychometric theory*. New York, NY: McGraw-Hill.

Ormel, J., Jeronimusa, B. F., Kotovc, R., Riese, H., Bosa, E. H., Hankind, B.,

Oldehinkel, A. J. (2013). Neuroticism and common mental disorders: Meaning and utility of a complex relationship. *Clinical Psychology Review*, 33(5), 686–697. doi:10.1016/j.cpr.2013.04.003

Ortiz, F. A., Church, A. T., Vargas-Flores, J., Ibanez-Reyes, J., Flores-Galaz, M., Iuit-

Briceno, Escamilla, J. M. (2007). Are indigenous personality dimensions culture specific? Mexican inventories and the five-factor model. *Journal of Research in Personality*, 41, 61–649. doi:10.1016/j.jrp.2006.07.002

Paraprofessional Healthcare Institute & Direct Care Workers of North Carolina (2009).

The 2007 national survey of state initiatives on the direct-care workforce: key findings. Retrieved from [www.phinational.org](http://www.phinational.org) on 10/26/12

- Paunonen, S. V. Jackson, D. N., Trzebinski, J., & Fosterling, F. (1992). Personality across culture: a multimethod evaluation. *Journal of Personality and Social Psychology*, 62, 447–456. doi:10.1037/0022-3514.62.3.447
- Perez Algorta G, Kragh, C. A., Arnold, L. E., Molina. B. S., Hinshaw. S. P., Swanson, J. M., Jensen, P. S. (2014). Maternal ADHD symptoms, personality, and parenting stress: differences between mothers of children with ADHD and mothers of comparison children. *Journal of Attention Disorder*, 1–12. doi:10.1177/1087054714561290
- Perkins, E. A., & Haley, W. E. (2010). Compound caregiving: When lifelong caregivers undertake additional caregiving roles. *Rehabilitation Psychology*, 55(4), 409–417. doi:10.1037/a0021521
- Pearlin, L. I., Mullan, J. T., Semple, S. J., & Skaff, M. M. (1990). Caregiving and the stress process - an overview of concepts and their measures. *Gerontologist*, 30 (5), 583–594. doi:10.1093/geront/30.5.583
- Perrig-Chiello, P., & Hutchison, S. (2010). Family caregivers of elderly persons: A differential perspective on stressors, resources, and well-being. *The Journal of Gerontopsychology and Geriatric Psychiatry*, 23(4), 195–206. doi:10.1024/1662-9647/a000025
- Phillips, A. C., Gallagher, S., Hunt, K., Der, G. Carroll, D. (2009). Symptoms of depression in non-routine caregivers: The role of caregiver strain and burden. *British Journal of Clinical Psychology*, 48, 335–346. doi:10.1348/014466508X397142.

- Pinquart, M. & Sorensen, S. (2007). Correlates of physical health of informal caregivers: A meta-analysis. *Journal of Gerontology*, 62(B), 126–137.  
doi:10.1093/geronb/62.2.P126
- Plant, K. M., & Sanders, M. R. (2007). Predictors of care-giver stress in families of preschool-aged children with developmental disabilities. *Journal of Intellectual Disability*, 51(2), 109–124. doi:10.1111/j.1365-2788.2006.00829.x
- Polman, R., Borkoles, E., & Nicholls, A. R. (2010). Type D personality, stress, and symptoms of burnout: The influence of avoidance coping and social support. *British Journal Of Health Psychology*, 15(3), 681–696.  
doi:10.1348/135910709X479069
- Pranjić, N. (2007). Burnout and predictors for burnout among physicians in Bosnia and Herzegovina--Survey and study. *Acta Medica Academica*, 36(2), 66–76.
- Qui, Y. & Li, S. (2008). Stroke: Coping strategies and depression among Chinese caregivers of survivors during hospitalization. *Journal of Clinical Nursing*, 17, 1563–1573. doi:10.1111/j.1365-2702.2007.02156.x
- Richter, J., Lauritz, L. E., du Preez, E., Cassimjee, N., & Ghazinour, M. (2013). Relationship between personality and coping with stress: An investigation in Swedish police trainees. *Psychology*, 4(2), 88–95. doi:10.4236/psych.2013.42012
- Rodin, J., & McAvay, G. (1992). Determinants of change in perceived health in a longitudinal study of older adults. *Journal of Gerontology*, 47(6), 373-384.  
doi:10.1093/geronj/47.6.P373

- Roth, D. L., Perkins, M., Wadley, V. G., Temple, E. M., & Haley, W. E. (2009). Family caregiving and emotional strain: Associations with quality of life in a large national sample of middle-aged and older adults. *Quality of Life Research, 18*(6), 679–688. doi:10.1007/s11136-009-9482-2
- Rothmann, S. & Coetzner, E. P. (2003). The big five personality dimension and job performance. *South African Journal of Industrial Psychology, 29*(1), 68–74. Retrieved from [http://www.ianrothmann.com/pub/psyc\\_v29\\_n1\\_a9.pdf](http://www.ianrothmann.com/pub/psyc_v29_n1_a9.pdf)
- Roscoe, L. A., Corsentino, E, Watkins, S., McCall, M., & Sanchez-Ramos, J. (2009). Well-being of family caregivers of persons with late-stage Huntington’s disease: Lessons in stress and coping. *Health Communications, 24*(3), 239–248. doi:10.1080/10410230902804133
- Schuengel, C., Kef, S., Damen, S., & Worm, M. (2010). People who need people: Attachment and professional caregiving. *Journal of Intellectual Disability Research, 54*(1), 38–47. doi:10.1111/j.1365-2788.2009.01236.x
- Shock, N. W. Greulich, R. C., Andres, R., Arenberg, D., Costa, P. T. Jr., Lakatta, E. G. & Tobin, J. D. (1984). *Normal human aging: The Baltimore longitudinal study of aging*. (NIH Publication No. 84-2450). Bethesda, MD: National Institute of Health.
- Stallwood, L. (2005). Influence of caregiver stress and coping on glycemic control of young children with diabetes. *Journal of Pediatric Healthcare, 19*(5), 293-300. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/16202837>

- Stearns, S.C., & D'Arcy, L.P. (2008). Staying the course: Facility and profession retention among nursing assistants in nursing homes. *Journal of Gerontology*, 63B(3), S113–S121. doi:10.1093/geronb/63.3.S113
- Testad, I. I., Mikkelsen, A. A., Ballard, C. C., & Aarsland, D. D. (2010). Health and well-being in care staff and their relations to organizational and psychosocial factors, care staff and resident factors in nursing homes. *International Journal of Geriatric Psychiatry*, 25(8), 789–797. Retrieved from <http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291099-1166>
- Truzzi, A., Souza, W., Bucasio, E., Berger, W., Figueira, I., Engelhart, E., Laks, J. (2008). Burnout in a sample of Alzheimer's disease caregivers in Brazil. *The European Journal of Psychiatry*, 22(3), 151–160. doi:10.4321/S0213-61632008000300004
- Uyanik, G. K. & Guler, N. (2013). A study on multiple linear regression analysis. *Procedia - Social and Behavioral Sciences*, 106 (2013 ) 234 – 240. Retrieved from [sciencedirect.org](http://www.sciencedirect.org)
- Wijngaart, M., Vernooij-Dassen, M., & Felling, A. (2007). The influence of stressors, appraisal and personal conditions on the burden of spousal caregivers of persons with dementia. *Aging & Mental Health*, 11(6), 626-636. Retrieved from <http://www.tandfonline.com/toc/camh20/current#.VRtekJPF840>
- Vellone E, Piras G, Sansoni J. (2002). Stress, anxiety, and coping styles among caregivers of patients with Alzheimer's disease. *Annali Di Igiene*. 14(3), 223–232. Retrieved from <http://www.seuroma.com/le-riviste/annali-di-igiene.html>

Weimand, B. M., Hedelin, B., Sallstrom, C., & Hall-Lord, M. L. (2010). Burden and health in relatives of persons with severe mental illness: a Norwegian cross-sectional study. *Issues Mental Health Nursing, 31* (2), 804-15.

doi:10.3109/01612840.2010.520819

Wilks, S. E. & Croom, B. (2010). Perceived stress and resilience in Alzheimer's diseased caregivers: Testing moderation and mediation models of social support. *Aging & Mental Health, 12*(3), 357–365. doi:10.1080/13607860801933323

## Appendix A. Perceived Stress Scale

**Perceived Stress Scale- 10 Item**

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, please indicate with a check how often you felt or thought a certain way.

1. In the last month, how often have you been upset because of something that happened unexpectedly?

___0=never	___1=almost never	___2=sometimes	___3=fairly often	___4=very often
------------	----------------------	----------------	----------------------	--------------------

2. In the last month, how often have you felt that you were unable to control the important things in your life?

___0=never	___1=almost never	___2=sometimes	___3=fairly often	___4=very often
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3. In the last month, how often have you felt nervous and "stressed"?

___0=never	___1=almost never	___2=sometimes	___3=fairly often	___4=very often
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4. In the last month, how often have you felt confident about your ability to handle your personal problems?



of your control?

___0=never	___1=almost never	___2=sometimes	___3=fairly often	___4=very often
------------	----------------------	----------------	----------------------	--------------------

10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

___0=never	___1=almost never	___2=sometimes	___3=fairly often	___4=very often
------------	----------------------	----------------	----------------------	--------------------

*Note:* From “A global measure of perceived stress,” by S. Cohen, T. Kamarck, and R. Mermelstein, 1983, *Journal of Health and Social Behavior*, 24 (4), p. 394-395. Adapted with permission from the American Sociological Association.

## Appendix B. Ways of Coping Questionnaire

- |    |   |         |
|----|---|---------|
| 1. | I did something that I didn't think would work, but at least I was doing something. | 0 1 2 3 |
| 2. | I tried to get the person responsible to change his or her mind.                    | 0 1 2 3 |
| 3. | I talked to someone to find out more about the situation.                           | 0 1 2 3 |
| 4. | I criticized or lectured myself.  | 0 1 2 3 |
| 5. | I tried not to burn my bridges, but leave things open somewhat.                     | 0 1 2 3 |

*Note:* From “The ways of coping questionnaire,” by Susan Folkman and Richard Lazarus, 1988. Copyrighted 1988 by Consulting Psychologist Press Inc. Reprinted with permission.

## Appendix C. Ways of Coping Questionnaire Permission Letter

For use by Natasha O'Connor only. Received from Mind Garden, Inc. on September 28, 2013

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For use by Natasha O'Connor only. Received from Mind Garden, Inc. on September 28, 2013



[www.mindgarden.com](http://www.mindgarden.com)

To whom it may concern,

This letter is to grant permission for the above named person to use the following copyright material for his/her thesis or dissertation research:

Instrument: *Ways of Coping Questionnaire*

Authors: *Susan Folkman, Ph.D. and Richard S. Lazarus, Ph.D.*

Copyright: *1988 by Consulting Psychologists Press, Inc.*

Five sample items from this instrument may be reproduced for inclusion in a proposal, thesis, or dissertation.

The entire instrument may not be included or reproduced at any time in any other published material.

Sincerely,

Robert Most  
Mind Garden, Inc.  
[www.mindgarden.com](http://www.mindgarden.com)

### Appendix D. NEO Five-Factor Inventory-3

The personality dimensions will be assessed with the NEO Five-Factor Inventory (NEO-FFI-3). This inventory is a well-validated, short version of the Revised NEO Personality Inventory (NEO-PI-R) developed by Costa and McCrae.

**Methods:** Administer the NEO-FFI-3 and record responses on the NEO data collection form. If the participant is not familiar with a word used in a statement, you may give them a synonym for the unfamiliar word. Appropriate substitutions are listed below in italics next to the possibly problematic word or phrases. These substitutions should only be used if the participant says they do not understand the word or phrase.

*Script: "Now I'm going to read some statements. Listen carefully. For each statement, choose the response on this card that best represents your opinion. [Show card, See appendix B]. Choose strongly disagree (1) if the statement is definitely false for you, choose Disagree (2) if the statement is mostly false, choose Neutral (3) if you can't decide, choose Agree (4) if the statement is mostly true, and choose Strongly agree (5) if the statement is mostly true for you. For example, if statement was "I laugh easily", and this was definitely true for you, you would say "strongly agree" (or choose Category 5).*

#### Item by item questions:

I am not a worrier  
 When I'm under a great deal of stress, sometimes I feel like I'm going to pieces  
 I rarely feel lonely or blue  
 Sometimes I feel completely worthless  
 I waste a lot of time before settling down to work  
 I often feel tense and jittery

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 Psychological Assessment Resources (PAR)  
 P.O. Box 998, Odessa, FL 33556

Alternative phrasings adapted from Markey PM, Markey CN, Tinsley BJ, Ericksen AJ. A preliminary validation of preadolescents' self-reports using the Five-Factor Model of personality JOURNAL OF RESEARCH IN PERSONALITY 36 (2): 173-181 APR 2002

## Appendix E. NEO-FFI-3 Permission Letter



Creating Connections. Changing Lives.

16204 N. FLORIDA AVENUE • LUTZ, FLORIDA 33549  
Telephone: 813.968.3003 • Fax: 813.968.2598 • Web: www.parinc.com

September 30, 2013

Natasha O'Connor  
145-19 228 Street  
Springfield Garden, NY 11413

Dear Ms. O'Connor,

Thank you so much for taking the time to contact me today regarding the use of the **NEO FFI-3** in your research project.

As you requested, the purpose of this letter is to verify that you have our permission to use the published form of the NEO FFI-3 for your project based on your purchase of the NEO FFI-3 materials from us. Based on our records, you purchased enough test forms to administer the test to as many as 50 participants.

In addition our records do indicate that you have completed the necessary qualification form to allow purchase of the NEO FFI-3. This form was signed by you and also by your supervising professor. Thank you for helping to insure the ethical use of psychological assessment products.

We very much appreciate your business and the opportunity to be of service to you. If you have any further questions or concerns, please do not hesitate to contact me directly at 1-800-331-8378 ext. 446.

Sincerely,

A handwritten signature in black ink, appearing to read 'Teri Lyon'.

Teri Lyon  
Technical Support Specialist II  
PAR, Inc.



Creating Connections. Changing Lives.

16204 N. FLORIDA AVENUE • LUTZ, FLORIDA 33549  
Telephone: 813.968.3003 • Fax: 813.968.2598 • Web: www.parinc.com

April 2, 2015

Natasha O'Connor  
145-19 228 Street  
Springfield Garden, NY 11413

Dear Ms. O'Connor

Thank you so much for taking the time to contact me today regarding the use of the **NEO FFI-3** in your research project.

As you requested, the purpose of this letter is to verify that you have our permission to use the published form of the NEO FFI-3 for your project based on your purchase of the NEO FFI-3 materials from us. Based on our records, you purchased enough test forms to administer the test to as many as 100 participants.

In addition our records do indicate that you have completed the necessary qualification form to allow purchase of the NEO FFI-3. This form was signed by you and also by your supervising professor. Thank you for helping to insure the ethical use of psychological assessment products.

We very much appreciate your business and the opportunity to be of service to you. If you have any further questions or concerns, please do not hesitate to contact me directly at 1-800-331-8378 ext. 446.

Sincerely,

A handwritten signature in black ink, appearing to read 'Teri Lyon'.

Teri Lyon, MBA  
Senior Technical Support Specialist  
PAR, Inc.



Creating Connections. Changing Lives.

16204 N. FLORIDA AVENUE • LUTZ, FLORIDA 33549  
Telephone: 813.968.3003 • Fax: 813.968.2508 • Web: www.par-inc.com

**Sent Via Email: [natasha.oconnor@waldenu.edu](mailto:natasha.oconnor@waldenu.edu)**

October 17, 2013

Natasha O'Connor  
Walden University  
145-19 228 Street  
Springfield Gardens, NY 11413

Dear Ms. O'Connor:

In response to your recent request, permission is hereby granted to you to include up to a total of three (3) sample items from the NEO Five-Factor Inventory-3 (NEO-FFI-3) Item Booklet in the appendix your dissertation entitled, *The effects of stress and coping in caregivers of individuals with Serious and Persistent Mental illness with personality characteristics as a moderating variable*. If additional material is needed, it will be necessary to write to PAR for further permission.

This Agreement is subject to the following restrictions:

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TWO COPIES of this Permission Agreement should be signed and returned to me to indicate your agreement with the above restrictions. I will then sign it for PAR and return a fully executed copy to you for your records.

Sincerely,

*Vicki M. McFadden*  
Permissions Specialist  
[vmark@parinc.com](mailto:vmark@parinc.com)  
1-800-331-8378 (phone)  
1-800-727-9329 (fax)

ACCEPTED AND AGREED:

BY:   
NATASHA O'CONNOR

DATE: \_\_\_\_\_

ACCEPTED AND AGREED:

BY:   
VICKI M. MCFADDEN

DATE: October 18, 2013

## Appendix F. Permission Letter for the Perceived Stress Scale

**Material Requested:**

"A Global Measure of Perceived Stress"  
 Sheldon Cohen, Tom Kamarck and  
 Robin Mermelstein  
*Journal of Health and Social  
 Behavior*, Vol. 24, No. 4 (Dec.,  
 1983), Appendix A

**Reprint to Appear In:**

"The correlation between  
 personality characteristics on stress  
 and coping among caregivers of  
 individuals with serious and  
 persistent mental illness."  
 Dissertation by: Natasha O'Connor

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## Appendix G: Information Sheet for Research Survey

## WALDEN UNIVERSITY

Principal Investigator: Natasha O'Connor

**Title of Study:** The correlation between personality characteristics on stress and coping among caregivers of individuals with Intellectual/Developmental Disabilities.

I am a graduate student attending Walden University and am currently completing my dissertation project as part of my coursework. You are invited to participate in this survey to explore the correlation between stress, coping, and personality characteristics among caregivers of individuals with intellectual disabilities/developmental disabilities. I am interested in finding out how stress affects one's ability to cope and to see if there is any relationship between stress, coping, and personality characteristics.

Your participation in this study will require completion of the attached questionnaire. This should take approximately 30 minutes of your time. Your participation will be anonymous and you are only required to complete the surveys once. You will be provided with a consent form which has been explained to you for your records. You are not asked to sign the consent, to ensure anonymity, but the receipt implies your consent for participation in the study. You will not be paid for being in this study or compensated for time. The survey does not involve any risk to you. However, the benefits of your participation may impact society by helping increase knowledge about the subject in this sector and contribute to the development of educational programs to assist in retention of workers as well as hiring of better suited workers in this sector which will in turn decrease turnover rates.

You do not have to be in this study if you do not want to be. You do not have to answer any question that you do not want to answer for any reason. I will be happy to answer any questions you may have about this study. If you have further questions about this project or if you have a research-related problem, you may contact me, Natasha O'Connor, at 917-743-2071. If you have any questions about your rights as a research participant, you may contact Walden University's Institutional Review Board (IRB) at 612-312-1210. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

Thank you,

Natasha O'Connor.

#### Appendix H: Scripted Recruitment of Participants at Staff Meetings

I am a graduate student from Walden University who is conducting a research study as part of my dissertation. I am looking at stress, coping, and personality characteristics of caregivers of individuals with intellectual disabilities/developmental disabilities. The survey will take approximately 30 minutes to complete and is voluntary. Your information is confidential and you are not required to reveal your name or other identifying information. Here is my contact information. Please contact me if you wish to participate.

## Appendix I: Demographic Survey

**DEMOGRAPHIC SURVEY**

What is your gender?

- Male
- Female

What is your age?

- 18-24
- 25-40
- 41-55
- 56 and older

How long have you worked with individuals with intellectual disabilities/developmental disabilities?

- 6-12 months
- 1-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- More than 21 years