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Relationships Between Stress, Family Support, and Resources Among Custodial Grandparents in Appalachia

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Walden University

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Yvonne S. Lee

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Walden University
2023

Abstract

Relationships Between Stress, Family Support, and Resources Among Custodial
Grandparents in Appalachia

by

Yvonne S. Lee

MSW, West Virginia University, 2013

BSW, West Virginia State University, 2011

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
Social Work – Family Studies and Intervention

Walden University

May 2023

Abstract

The Appalachian region has experienced a substantial increase in the number of grandparent-headed households providing care to grandchildren. Custodial parenting is not a typical responsibility for many grandparents and can be challenging. The specific problem addressed in this research study was the high level of stress experienced by many custodial grandparents. The theoretical foundation of the current study was based on Selye's stress theory, which was introduced in 1936 and examined biological stress that he referred to as "the syndrome of being sick." The purpose of this quantitative, nonexperimental, and correlational study was to examine the predictive relationship that custodial grandparents' use of family resources (formal, e.g., medical arrangements and financial) and family support (informal) has on parental stress. The research question focused an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age. A total of 81 participants completed surveys using SurveyMonkey and Selye's stress theory and a quantitative correlational design were used to answer the research question. The main finding was that the level of family support of participants significantly predicts their level of parental stress. Therefore, the null hypothesis was rejected. It is recommended that future research includes conducting a longitudinal study to further examine the complexities of family support and using alternative methods for participant recruitment to obtain a more diverse study population. Social workers and social work program administrators might consider tailoring interventions and screening tools targeted to custodial grandparents that take into account parental stress and relational dynamics for social work practice and positive social change.

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Dedication

I would like to dedicate my dissertation to my Husband, who believed I could do this. To my daughter Kenna and my granddaughter CaMya for dealing with me and being my biggest cheerleader. To my sorority sister Dr. Shaniqua Smith who continued to push me when I wanted to give up and believed in me and knew this was possible. To my angel "MySun" Cameron whose spirit remained with me and allowed me to push through this and not give up. To my parents from the beginning instilled a drive and work ethic in me to achieve anything I set out to do. To my siblings whom I love for believing in me through it all even when I didn't believe in myself. I love you and thank you from the bottom of my heart.

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Chapter 1: Introduction to the Study

Introduction

The number of grandparent-led households (grand families) in the United States has risen to over 4.9 million up from the 2.4 million noted in the 2010 census (Cornelius et al., 2021, p. 4). Grandparent-headed households have doubled in the past 10 years in the United States (Woods, 2020, p. 12). West Virginia has been ranked as the state with the second-highest number of grandparent-headed households (United States Census Bureau, n.d.). Specifically, the Appalachian region has approximately 23,000 grandparents who have an obligation to their grandchildren, and parents in more than half of these households are not present (Hatcher et al., 2018, p. 42).

Appalachia expands from the southern tier of New York State to northern Alabama, and West Virginia is located entirely within the Appalachian region (Appalachian Regional Commission (ARC), n.d.). Although grandparents living in the Appalachian region may understand how to parent, the lack of informal and formal support, limited access to resources, and low levels of education may present challenges as they attempt to care for grandchildren (Doley et al., 2015; Hayslip et al., 2018). In addition, findings from several studies have shown that grandparents who provide custodial care to grandchildren experienced more health issues such as stress, depression, anxiety, and lower self-esteem compared to noncustodial grandparents (Bailey et al., 2019; Doley et al., 2015; Xu et al., 2020). According to Hayslip et al. (2018), older grandparents also tend to need more information about resources available for and related to caring for grandchildren. Gurley (2016) reported that the challenges faced by

grandparents raising grandchildren in rural, impoverished communities have largely been ignored in the literature.

During my literature review, I did not locate research that examined the challenges encountered by grandparents raising grandchildren in Appalachia, which is an area that has consistently been identified as having high levels of poverty (Gurley, 2016; Keller et al., 2019). Therefore, there is a gap in the research about how family support, stress, and resources are associated in Appalachia (Gurley, 2016; Keller et al., 2019). The problem that I explored in this study was the issues related to the access to formal, informal, and financial resources that may contribute to stress for custodial grandparents in Appalachia.

Chapter 1 includes the context and background for this study. I also present the problem statement, purpose of the study, significance of the study, nature of the study as well as the research question and hypothesis. Lastly, Chapter 1 includes a discussion of the theoretical framework, definitions of terms, assumptions, the scope of the delimitations, and the limitations of this study.

Background of Study

The Appalachian region has experienced a substantial increase in the number of grandparent-headed households providing care to grandchildren (Hansen et al., 2020; United States Census Bureau, n.d.). Caring for grandchildren has been shown to affect grandparents in the form of increased stress and poor physical and mental health (Adams, 2018; Woods, 2020). These adverse effects are driven by a lack of formal, informal, and financial support from the state, family, and community.

Custodial Grandparenting

Custodial parenting is not a natural responsibility bestowed upon many grandparents and can be challenging. These challenges expose grandparents to stress that may require professional intervention (Smith et al., 2016). A high level of stress among custodial grandparents can harm parenting and trigger harsh reactive caregiving (Fokakis et al., 2020; Lee & Jang, 2019). Stress hurts the parent-child relationship, and it is predictive of nonoptimal social-emotional and cognitive results for children and adolescents (Fokakis et al., 2020). Unlike parenting, caring for the second time does not come naturally for custodial grandparents (Kelley et al., 2021). One of the adverse consequences of custodial parenting by a grandparent is an adverse effect on their physical health (Fokakis et al., 2020).

Custodial Grandparenting and Physical Health

Some grandparents older than 65 years may be vulnerable to adverse health conditions because of reduced immunity due to aging (Peterson, 2018, p. 202). These vulnerabilities may expose them to adverse health conditions that reduce their ability to take care of their grandchildren (Lee & Jang, 2019). In a longitudinal study, Fokakis et al. (2020) compared the health status of custodial and noncustodial grandparents. Only grandparents who were in good health conditions before providing custody and caring for grandchildren were selected to participate in the research (Fokakis et al., 2020). The results indicated that custodial grandparents reported worse health status than their noncustodial counterparts (Fokakis et al., 2020). The disparity in health conditions was

attributed to stress resulting from the burden of grandparenting (Fokakis et al., 2020; Lee & Jang, 2019).

Scholars have shown that custodial grandparents often experience adverse health changes when placed in the role of being the primary caregiver to grandchildren (Kelley et al., 2021; Lee & Jang, 2019). Fokakis et al. (2020) found that custodial grandparents reported worse health status than their noncustodial counterparts. The challenges experienced may lead to several health risks for the grandparents (Lee et al., 2016; Mendoza et al., 2018). These health issues can lead to other consequences such as death, which is of concern for grandparents consistently experiencing poor health issues, especially female grandparents (Jang & Tang, 2019; Lee et al., 2016; Mendoza et al., 2018; Yalcin et al., 2018). Conversely, the existing literature also suggests that caring for grandchildren has neither a beneficial or detrimental effect on grandparents' health (Oshio, 2021; Silverstein & Zuo, 2021). Another adverse consequence of custodial grandparents is an effect on mental health. The examination of how health and custodial parenting relates was important to understand its effects, which are resultant of mental health.

Custodial Grandparenting and Mental Health

According to Kelley et al. (2021), caregiving grandparents generally experience a more significant degree of adverse mental health outcomes than their nonparenting counterparts. Tang and Farmer (2020) found that providing a medium level of care to grandchildren was associated with fewer baseline depressive symptoms than noncaregivers. Caregiving grandparents generally experience a more significant degree of

adverse stress and mental health outcomes than their nonparenting counterparts (Kelley et al., 2021). Similarly, Whitley and Fuller-Thomson (2018) also found a high risk of stress and anxiety among custodial grandparents which were linked to lack of social support and inadequate financial resources. Furthermore, dealing with children suffering from a myriad of problems, such as caring for children who have behavioral issues, drug addiction, poor education, and lack of discipline, can cause the grandparent to suffer anxiety, depression, and stress as they work to address children's problems (Keller et al., 2023). For grandparents caring for children who were previously exposed to traumatic events, they, too, may develop secondary trauma and stress (Davis et al., 2020; Meyer et al., 2017). The level of trauma and distress is elevated by a feeling of guilt, loneliness, anger, and stress associated with custodial grandparenting (Roberto et al., 2022). This comprehension of how parenting affects mental health is critical in understanding the triggers of stress (Shorter & Elledge, 2020).

Limited Access to Resources

When grandparents take on the parental role, they need formal and informal support to lessen the distress associated with caring for their grandchildren (McCarthy, 2021). However, most grandparents are placed in the primary caregiver's role with little to no prior notice and without necessary social and financial support (Lent & Otto, 2018). Meyer and Abdul-Malak (2020) attributed stress levels to grandparenting demands that exceed the resources and support needed in their parenting role. The resources comprise both formal and informal resources necessary for supporting custodial grandparents and grandchildren in their custody (Fernandes et al., 2021). However, it is not clear if access

to formal, informal, and financial resources among caregiving grandparents affects the delivery of necessary services to grandchildren in their custody (Whitt-Woosley et al., 2018).

Informal Support

Informal support is defined as unpaid assistance from friends or family (Asking lots, 2021). As demonstrated by Whitley et al. (2016a), social support is the most effective mediator for addressing stress and increasing the mental health of custodial grandmothers. Mendoza (2018) supported that social support through family and social benefits schemes can reduce social stigma and associated distress levels in custodial grandparents. The limited support from peers, family, and community may contribute to adverse health conditions in custodial grandparents, including depression, cardiovascular disease, diabetes, hypertension, cancer, strokes, and arthritis. Informal support is often referred to as family support (Asking lots, 2021; Whitley et al., 2016a).

Formal Support and Parenting

Formal support is defined as paid services delivered by professional care providers (Fee et al., 2021). Formal resources include parental support groups, educational workshops, family physician assistance, early childhood programs, school daycare or respite programs, counseling services, legal help, or, in some cases, services provided by foster agencies (Generations United, 2017). Using formal resources is a standard recommendation for grand families that has been shown to aid grandparent caregivers as they adopt their new roles and maintain their care across time (Hayslip et

al., 2017). Formal support is referenced as family resources used to support families to gain access to food, shelter, medical assistance, and education (Harris et al., 2023).

Financial Support in Parenting

Financial resources are comprised of food stamps, financial housing assistance, bill payment support, or payments received directly from the government that match foster care grants and clothing vouchers (Generations United, 2017). Grandparents on food stamps could get more of the same if they are caring for children. While there are multiple forms of state support to custodial grandparents, the type of state support received depends on the legal relationship between grandparent and the child (Hayslip et al., 2017). Financial support comes through foster care reimbursements, Temporary Family Assistance, and guardianship subsidies (Dunifon et al., 2020). Other forms of financial support include Medicaid and Husky medical insurance plans for children not covered under private health insurance (Meyer & Abdul-Malak, 2020). Most grandparents in the Appalachian region are retirees and seniors with a pension as their only income (Shorter & Elledge, 2020). Besides, the lack of necessary resources and support from peers, families, and the state to care for the grandchildren under their care is a key challenge to caring for the children under their care (ARC, 2021a). Financial support is a family resource given to aid families with financial assistance.

After a thorough investigation of the literature, I did not locate any study that examined the relationships between stress, family support, and resources among custodial grandparents in Appalachia. I identified a gap in knowledge that needs to be filled to effectively address the difficulties custodial grandparents face in Appalachia. This study

was needed to understand the needs of custodial grandparents as well as to provide adequate resources to ensure the grandchildren and the grandparents in Appalachia are receiving adequate resources to ensure the families can provide the proper care needed for sustainability to prevent trauma, poor physical and mental health conditions, lack of education or poor education, drug abuse, hunger, and homelessness.

Problem Statement

The number of grand families in the United States has been on the rise (Generations United, 2021). The specific problem that I addressed in this study was the high level of stress among custodial grandparents. Several studies have stressed the importance of researching the level of stress among custodial grandparents (Hansen et al., 2020; Lee & Jang, 2019; Rawn et al., 2021); however, few studies have focused on custodial grandparents in the Appalachia area. Custodial grandparents often experience adverse health changes when placed in the role of being the primary caregiver to the grandchildren (Kelley et al., 2021; Lee & Jang, 2019). In the process of caring for these children, custodial grandparents may experience secondary trauma and stress (Davis et al., 2020). Scholars have emphasized the importance of social support and resources for custodial grandparents (Carlson, 2021; Pandey et al., 2019; Tompkins & Vander Linden, 2020). Most studies pertaining to custodial grandparents' use of social support and other resources have been based on qualitative methods (Fokakis et al., 2020; Tang & Farmer, 2020; Xu et al., 2020). In this study, I expanded on the existing literature on stress experienced by grandparents raising grandchildren in the Appalachia area by adopting a

quantitative, correlational approach to examine the relationship between custodial grandparents' utilization of family resources and support and the parental stress levels.

Purpose of the Study

The purpose of this quantitative, nonexperimental, and correlational study was to examine the predictive relationship that custodial grandparents' use of family resources (formal, e.g., medical arrangements and financial) and family support (informal) has on parental stress. The independent variables of this study were family support and family resources received by the custodial grandparents, and the dependent variable was the level of parental stress experienced by custodial grandparents in Appalachian. The geographical location of this research was constrained to the Appalachian region, specifically in West Virginia. The targeted population of individuals was custodial grandparents who are raising their grandchildren on a full-time basis. Findings from this study included information regarding the relationship between the use of family support and family resources and levels of parental stress among custodial grandparents. The results include empirical evidence of the need for developing interventions to address these grandparents' stress by providing avenues to help them gain access to needed resources that may reduce their stress.

Research Questions

I used the following research question in this study:

Research Question (RQ): Is there an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age?

Alternative Hypothesis (H_1): There is an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age?

Null Hypothesis (H_0): There is no association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age?

Theoretical Framework

The theoretical foundation of the current study was based on Selye's stress theory, which was introduced in 1936 and examined biological stress that he referred to as "the syndrome of being sick" (Selye, 1952, p. 4). Selye completed his first experiment on rats in a lab to understand the causation of being sick. Through this experiment, he found a nonspecific physiological defense reaction in animals (Selye, 1952, p. 5). This reaction became known as biological stress. Stress is considered the nonspecific response of the body to any demand (Selye, 1952, p. 6). The theory of stress provides a framework linking stress to chronic illnesses. Several studies have shown that prior exposure to stress influences the future response to stress across multiple neural and endocrine systems (Lu et al., 2021). Hence, stress remains a fundamental component of the etiology of several diseases.

The stress theory was appropriate for this study because the premises of the theory were applicable to understand the relationships between access to resources and levels of stress in custodial grandparents living in Appalachia (Tan & Yip, 2018). For custodial grandparents, the main source of stress is caring for grandchildren and not

having adequate support to provide the required care (Tang & Farmer, 2020). Challenges related to caring for the second time and lacking adequate social support and resources lead to nonspecific reactions of stress experienced by custodial grandparents (Davis et al., 2020). These conditions cause the dysfunction and were referred to in this study as stressors. These stressors (e.g., caring for grandparents and lack of social and economic support) create significant adverse health conditions for grandparents, leading to biological stress (Meyer & Abdul-Malak, 2020).

Nature of the Study

This study was quantitative, with a correlational design and a cross-sectional approach. A quantitative research design was appropriate for this study because I measured more than two variables and assessed the relationships between the variables (Frankfort-Nachmias et al., 2015). Further, I collected numerical data to potentially generalize the results of grandparents who are primary caregivers of one or more children (Frankfort-Nachmias et al., 2015). A cross-sectional approach was appropriate because I collected information from participants at one point in time (Frankfort-Nachmias et al., 2015).

The sample size for this study was large enough to determine statistically significant results in the case that the variables were significantly related (Frankfort-Nachmias et al., 2015). I used GPower 3.1.9.7 to calculate the sample size. The estimated sample size for this study was 77 with a margin of error of .05, power of 80, and a confidence level of .95. I recruited participants from West Virginia State University Healthy Grand families, Relatives as Parents (RAP), and Kanawha County Schools

(KCS) Head Start. The sample included custodial grandparents who provided full-time care of at least one grandchild living in West Virginia.

Definition of Terms

In this section, I define key concepts, study locations, and participants related to the phenomenon studied in this research. The terms and how they are used in this study are listed below with their operational definitions.

Appalachia: Appalachia is a region in the Eastern United States that stretches from the southern tier of New York to northern Alabama and Georgia. The Appalachians are people who reside in Appalachia (ARC, 2021b; Gurley, 2016).

Central Appalachia: Central Appalachia is a region in Appalachia that includes the southern counties of West Virginia and the eastern counties of Kentucky (ARC, 2021b).

Custodial grandparents: Custodial grandparents have received custody of their grandchildren via a legal document granting them temporary custody via biological parents, or family or civil court (Taylor et al., 2017).

Family support: Family support is support provided by family members, friends, and social groups (Hayslip et al., 2015).

Financial resources: Finance is the money (resources) inputted into a family by any source.

Formal support: Formal support refers to the type of support being received through government assistance, Child Protective Services (CPS), adoption services, and or court-ordered support (Hayslip & Goodman, 2008).

Foster care: Foster care is child placement by CPS with a nonfamily member who provides care to a dependent child under the age of 18 (Bell & Romano, 2017).

Grand families: Grand families are families with grandparents as the head-of-household no matter the legal status of the child in the home (Wamsley & Dunn, 2018).

Informal support: In this study, informal support refers to the type of support being received from a family member, friend, and social group (Hayslip & Goodman, 2008).

Kinship care: Kinship care refers to a child placement by CPS, family court, or through a signed temporary custody agreement with a relative who provides care to a dependent child under the age of 18 years (Bell & Romano, 2017).

North Central Appalachia: North Central Appalachia is a region in Appalachia consisting of all northern counties of West Virginia and includes a few southern counties (ARC, 2021b).

Assumptions

I made several assumptions during this study. I assumed that a sizable number of grandparents would be available to provide custodial care of grandchildren and that grandparents have a significant role in the parenting of their grandchildren in Appalachia. I also assumed that custodial grandparents in Appalachian have the required information on the various challenges they encounter while caring for grandchildren under their care. I further assumed that selected participants were truthful and honest in providing information to yield credible results (Yilmaz, 2013). I assumed that recruited grandparents for the study would be willing and available to respond to survey

instruments in time for analysis. I assumed the participants had a good understanding of the questions presented in the instrument to ensure that the information they provided was correct and appropriate to answer the research questions. I used this assumption to overcome bias and misrepresentation common in self-reported data to improve the credibility and validity of results.

Furthermore, I assumed the quantitative, correlational study design was the most relevant research approach for collecting credible data for this study. I chose a quantitative research method assuming that the outcomes could be replicated and generalized to other populations. I assumed that all volunteers selected to participate in the research would complete the questionnaire satisfactorily and finish the study. The recruiting criteria were as follows: (a) both illiterate and literate grandparents (b) willing to understand the survey and answer the questions truthfully. Additional assumptions included the belief that the instruments selected to collect data for this study were the most appropriate for this study.

Scope and Delimitations

The study was limited to custodial grandparents in West Virginia, in the North Central/Central region of Appalachia. The purpose of this study was to examine the relationships between stress, family support, and family resources among custodial grandparents in Appalachia. I collected their demographics and their responses in the survey. Each of the participants was recruited through one of the two programs, Healthy Grandfamilies and Relatives as Parents (RAP) programs. By restricting my search to two agencies, participation was limited to grandparents who had minimal to low income, had

younger children in the home, or already sought assistance for resources. I also used snowball sampling in which participants were recruited by other participants who had been selected to participate in the research. This was done to access a greater number of grandparents to access the target population.

Limitations

There were several limitations associated with this research. First, the targeted population was limited to custodial grandparents in the North Central/Central region of Appalachia in West Virginia. Consequently, the results from the study may not be generalizable to other custodial grandparents and grand families in different states in the United States. Second, I conducted a quantitative, correlational study using a cross-sectional approach. Quantitative research does not address the “how” or “why” of the relationships between variables (Frankfort-Nachmias et al., 2015). A cross-sectional approach only allows for a snapshot in time. I considered the cross-sectional approach a limitation because family circumstances evolve daily, and problems may continue to manifest in these households; what may be perceived as good today can change in a matter of minutes. This situation is a factor of life for which quantitative research does not account.

To address the issue of illiteracy for participants completing the survey online, I included my information for the grandparents to contact me for clarification. For phone interviews, I was available to assist participants during the survey and answer any questions that may arise. Lastly, the participants were volunteers, which can skew the study findings. Recruiting volunteers is a limitation because when people are volunteers,

they do not feel it is necessary to answer all of the questions. These limitations may lead to missing data for the study (Simon, 2011).

Significance of the Study

The findings of the research may be beneficial to the practice of social work, research, and society. In practice, practitioners in the field of social work may use the study findings to develop interventions for addressing parental stress among custodial grandparents. Further, the findings may be used to improve access to resources needed to provide care for grandchildren under their custody. Policymakers can use the results to advocate the need for developing programs to support custodial grandparents and address related parental stress. Social workers may use the information as empirical support for the need for additional support programs for grandparents providing custodial care for grandchildren. These programs could focus on helping grandparents obtain the formal, informal, and financial resources they need to support their grandchildren (Mendoza et al., 2020). The findings may form the basis for future studies that focus on addressing the challenges of custodial grandparenting. The research contributes to social change by providing information regarding how the access to and use of resources (i.e., formal, informal, and financial) are related to parental stress in custodial grandparents.

Summary

Throughout history, grandparents have supported their extended families by helping with their grandchildren. Grandparents who helped out traditionally included letting grandkids visit for the summer, picking them up after school, spending time with them on the weekend, and even attending their sports activities (Smith, 2023). In more

recent years, some grandparents have faced being both the grandparents and the primary caregiver for their grandchildren. During the emergence of this recent phenomenon of grandparent-headed households, West Virginia was quickly ranked number two. In the United States over the last decade, the number of grandparent-led households has risen from 2.4 million to 4.9 million (Cornelius et al., 2021, pg.2).

Findings from previous studies have shown that grandparents' health has been marginalized by taking on a parental role to their grandchildren (Buchanan & Rotkirch, 2018). Studies have shown that grandparents who take in their grandchildren face significant stress and increased isolation (Whitley et al., 2016b). Due to the growing number of grandparent-headed households, it is important to focus on these families in order to provide the needed supports. I addressed this gap in hopes of supporting grandparents, the communities in which they live, and the numerous organizations that continue to look for ways to help them.

Chapter 2 includes a discussion of the theoretical framework of the study. Chapter 2 also includes an overview of literature addressing grand families in West Virginia, the definition of custodial grandparents, eligibility for custodial grandparents, and why grandparents end up as custodial grandparents.

Chapter 2: Literature Review

Introduction

The purpose of this quantitative, nonexperimental, correlational study was to examine the predictive relationships between grandparents' perceptions of their use of various resources (formal, informal, and financial resources) and the stress levels of the grandparents. Researchers have shown that custodial grandparents are at increased risk of suffering from poor health, addictions, unemployment, homelessness, and limited food resources as a result of providing care for their grandchildren (Adams, 2018; Peterson, 2018; Woods, 2020). Many grandparents may lack the informal, formal, and financial resources needed to adequately care for their grandchildren (Hsieh et al., 2017; Peterson, 2018). Formal resources in this context include different forms of government support, such as after-school programs, educational programs, summer camps, respite care, and transportation. Informal resources include community support, assistance from family and friends, as well as support offered by churches and other entities. Financial resources consist of support such as food stamps, financial housing assistance, bill payment support, or payments received directly from the government that matches foster care grants and clothing vouchers.

Chapter 2 includes a discussion of the search strategy used to search for literature and the guiding theoretical framework. I also review empirical works of literature related to custodial grandparents and associated stress. The key themes used to organize the review of empirical literature include a background of custodial grandparents, health concerns of grandparents, the stigma linked to custodial grandparents, stress and anxiety

among custodial grandparents, and family conflict among custodial grandparents. I also review the literature on grandparents' limited access to resources as well as trauma in children living with custodial grandparents.

Literature Search Strategy

I conducted a literature search using the Walden University Library, the West Virginia State University Library, the West Virginia Health Data, Google, the United States Department of Agriculture, Kids Count, Appalachian Regional Commission (ARC), and other relevant websites. The databases included in the search were ERIC, Nursing and Allied Health, ProQuest, ProQuest Central, PsychINFO, SAGE journals, Social Work, SocINDEX, and WVinfo.org. The search terms that I used in the search were a combination of the following words: *Appalachia, Appalachian, Appalachian culture, Appalachian Region, behavioral health, custodial grandparents, drugs, family support, family resources, financial resources, financial support, formal support, foster care, grandparent caregivers, generational, grandchildren, grand families, grandparents, grandparents program, informal support, kinship, poverty, Selye stress theory, stress theory, stress, and resources*. I completed the search by specifying the period 2017 to 2023 to gather the most recent literature to support the research. Older works of literature were also included to support the theory and seminal work.

Theoretical Foundation

Hans Selye's Stress Theory

Hans Selye's stress theory was the theoretical foundation of this study. Known as the "father of stress research," Selye first introduced the stress theory in 1936 as

biological stress to describe the body's nonspecific response to any demand (Selye, 1952, p. 2). Selye focused on the patient's universal reactions to sickness rather than signs and symptoms of various diseases (Selye, 1952, p. 3). During ward rounds, Selye often noticed numerous common complaints in patients even though the patients were suffering from different illnesses. The common complaints included fatigue, lost appetite, loss of weight, preferring to lie down, and not being in the mood to work. Selye described these common complaints as a "syndrome of just being sick" (Selye, 1952, p. 3). Selye discovered that stress is an underpinning nonspecific signs and symptoms of any disease.

In his first laboratory experiment using rats, Selye found a nonspecific physiological defense reaction in animals, which he called "biological stress" (Selye, 1952, p. 4). He placed rats in different stressful situations, such as the cold roof of a building or revolving treadmill that required rats to run continuously to stay upright (Selye, 1952). Selye discovered the same findings from each experiment: peptic ulcers, lymphatic atrophy, and adrenal hyperactivity (Selye, 1952, p. 6). These findings were linked to the hypothalamic-pituitary-adrenal axis to the body's coping mechanism to stress. Based on these results, Selye concluded that stress is always present in the person whenever they are exposed to a nonspecific demand. He termed this stress as the "general adaptation syndrome," commonly known as Selye's syndrome (Selye, 1952, p. 97). He divided the total response to stress into three stages: alarm reaction, the resistance stage, and the exhaustion stage. Selye proposed that a general adaptation syndrome (GAS) resulted from stress consisting of an initial phase of alarm followed by an adaptation and resistance phase, which culminates in exhaustion or death. He argued that whenever a

person experiences stress, they are taken off guard at first before attempting to maintain homeostasis by resisting the change and eventually becomes a victim of exhaustion as they counter the stressful situation (Selye, 1952). Selye contended that all individuals encounter stress during a period of illness and that this type of stress differs fundamentally from an acute or flight stress response caused by a perceived threat (Selye, 1952). Selye explained that secretions of hormones from endocrine glands such as the pituitary, medulla, and cortex mediate response in acute stress (Selye, 1952).

Previous Application of Research

Selye's (1952) stress theory has been widely applied in empirical studies to understand and manage stress in patients. Jezova and Herman (2020) used the theory of stress to assess posttraumatic stress disorders and substance use disorders related to stress hormones. These authors found that different intensities of various stressors are reflected in multiple central and peripheral neurochemical parameters, revealing remarkable neuroendocrine responses (Jezova & Herman, 2020). These findings are consistent with Selye's theory of stress regarding endocrine secretions as a result of stressing situations. Jezova and Herman also found that certain disorders and diseases were linked to stress such as cancer, cardiovascular disorders, cognitive impairment, metabolic diseases, and mental health problems. Hence, these findings confirm the prevalence of physical and mental health diseases associated with stress among custodial grandparents (Tan & Yip, 2018).

Stangor and Walinga (2014) used Selye's (1952) stress theory to examine ways to cope with stress. The researchers conducted a qualitative descriptive study examining

ways of coping using a sample size of 15 participants. The authors observed that individual conceptualization of stress determines their coping, response, and adaptation strategies to stress. Consistent with Selye, Stangor and Walinga observed that stress is a psychological response pattern that acts like a defensive mechanism, and is characterized by an alarm, resistance and exhaustion. The researchers also found that how an individual conceptualized stress determined their response and coping abilities. Also, Hansen et al. (2020) found that prolonged or severe stress results in illness or even death as adaptation. The findings are consistent with Selye's assertion of stress as a psychological response to stressors (Stangor & Walinga, 2014).

Robinson (2018) examined the historical application of Selye's (1952) theory of stress in the field of physiology, medicine, and psychology. The author found that Selye's stress theory has contributed to the understanding of psychological stress. Robinson (2018) acknowledged that psychological stress from Selye's perspectives has been immensely useful across various disciplines such as physiology, medicine, neuroscience, epidemiology, psychiatry, and psychology. Furthermore, Szabo et al. (2017) analyzed stress in the context of self-efficacy to explain psychological issues. Consistent with Selye's stress theory, these authors asserted that stress is a stimulus response and a reaction to a process. As a stimulus, stress is focused on factors affecting self-balance. As a reaction, stress is explained in terms of restlessness condition which occurs when experiencing a new situation. However, the authors emphasized that individuals have different reactions to stress depending on their level of self-efficacy.

Application in This Study

The premises of stress theory as proposed by Selye (1952) were relevant for explaining stressful situations encountered by custodial grandparents while caring for children. Selye provided a framework linking stress to chronic illnesses. Several studies have shown that prior exposure to a stressful situation influences the future response to stress across multiple systems (Jezova & Herman, 2020; Robinson, 2018; Szabo et al., 2017).

The source of challenges of stress among custodial grandparents is the burden associated with caring for children for the second time and a lack of adequate resources and support to meet the caring needs of children. In this study, I defined formal and informal support as being the nonspecific demand that creates nonspecific reactions of stress. Accordingly, most custodial grandparents are exposed to stressful situations during the second round of caring for children and having inadequate resources and support to care for the children. These grandparents may experience stress whenever they are exposed to nonspecific demands. The lack of formal and informal support leads to the social and economic conditions that cause the dysfunction and were referred to in this study as stressors. When an individual encounters an event that requires them to adapt to a new circumstance, the body goes into a flight or fight mode to protect itself from becoming sick. Stressors create significant adverse health conditions for individuals encountering biological stress. In conclusion, the application of Selye's stress theory was relevant in this study to provide a better understanding of how caring for children and lack of resources and support cause stress to custodial grandparents living in Appalachia.

Review of Related Literature

Concept of Custodial Grandparents

A custodial grandparent is an individual who has the responsibility of raising grandchildren full-time without assistance from the children's biological parents (Bailey et al., 2019). As noted by Hayslip et al. (2020) in a qualitative descriptive study, grandparents step in to raise grandchildren when parents are unwilling or unavailable to raise their children. In a qualitative explanatory study, Fernandes et al. (2021) also affirmed that custodial grandparents may raise their grandchildren out of love or to protect the children while also seeking to manage the relationship with the children's parent(s). On the other hand, grandparents may be forced to become custodial caretakers for reasons beyond their control (Dunfee et al., 2021). Grandparents in the United States provide custody of grandchildren in the following situations: incarcerated parents, teen pregnancy, substance abuse, parental death, and emotional problems (Ungar & Theron, 2020). Placing grandparents in the role of a parent changes the family dynamic and may create tension between the grandparents and their children. This often forces the grandparents to act as mediators and protectors of their grandchildren (Buchanan & Rotkirch, 2018). Often, grandparents provide custodial care to their grandchildren to keep them out of foster care. Ungar and Theron (2020) observed that custodial grandparents require greater attention and support to provide quality care to their grandchildren. Custodial grandparents face more social and economic hardships than noncustodial grandparents. Many grandparents, particularly those without full legal guardianship, continue to not qualify for welfare programs for benefits (Brunissen et al., 2020).

Many of the studies on grandparenting focus on the causes and challenges experienced by custodial grandparenting following a dramatic increase in the number of grand families in the early 1990s (Dockery, 2020; Hayslip et al., 2020). Researchers have acknowledged the high level of stress among grandparents and psychological symptoms associated with caring for grandchildren (Dunfee et al., 2021; Tang et al., 2022). Statistics reveal that 5% of American children were either living with grandparents or relatives by 1990. In about 30% of the homes, neither of their biological parents were present, and children in those homes were solely under the care of grandparents (Cornelius et al., 2021). The number of custodial grandparents increased to 4.9 million in 2020, which is a substantial increase from 2010 census data (Cornelius et al., 2021). The highest increase in the number of grand families was reported among lower-income families, African Americans, and Hispanic people (Hayslip et al., 2017).

Health Concerns Among Custodial Grandparents

Caring for grandchildren has negative impacts on custodial grandparents in the form of increased stress as well as poor physical and mental health (Adams, 2018; Woods, 2020). Dockery (2020) identified various challenges associated with custodial grandparenting as they take up the parental role of caring for children for the second time. The authors associated these challenges to limited income in these families exacerbated by a lack of social and public services needed to care for the children. These challenges have generated excessive stress in grandparents and, subsequently, physical and mental health disorders, such as cardiovascular diseases, anxiety, and depression disorders (Studts et al., 2022). Stress levels may exacerbate physical and mental health problems in

grandparents (Tang et al., 2022). Therefore, public policy reforms must focus on increasing access to public welfare assistance to improve the quality of life for grandparents and children.

In most cases, custodial grandparents have reported pressure in taking care of their grandchildren, especially after they are done with the parenting role for their own children. In a qualitative study aimed at determining the challenges grandparents face, Teerawichitchainan and Low (2021) found that caring for children for the second time increases the stress that results from the unexpected responsibility of grandparents providing custodial care. Besides the responsibilities, Hansen et al. (2020) indicated that grandparents are also strained financially, which leaves them with little or no money to cater for their own medication, especially for grandparents without health coverage. In a recent qualitative descriptive study, Fokakis et al. (2020) found that the new responsibility of providing social, emotional, and financial well-being to grandchildren is stressful for most custodial grandparents. Furthermore, in a mixed-methods study, Ates (2017) contended that raising grandchildren can have adverse effects on the self-health of grandparents, especially in resource-constrained families.

Manns et al. (2017) used a mixed-methods design to assess involvement of grandparents in daily activities. These authors found that custodial grandparents are involved in extraneous daily activities such as cleaning and cooking for children, which leaves them less time for self-care (Manns et al., 2017). As a consequence, grandparents have minimal time to engage in physical activities to improve their physical fitness. As explained by Brunissen et al. (2020), custodial grandparents are physically exhausted as

they undertake daily chores such as cooking, doing laundry, cleaning, and running errands. When they have the responsibility of raising grandchildren, their daily life practices change so that they may focus on caring for children at the expense of practicing their self-care (Brunissen et al., 2020). These custodial grandparents experience numerous changes in their lives resulting from their new responsibilities (Polvere et al., 2018). For instance, custodial grandparents are reputed to be prone to anger. Most of them believed that at their age, they would be resting without many obligations (Brunissen et al., 2020). Raising grandchildren at this age is exhausting for most custodial grandparents.

In studies on the health impacts of custodial parenting, researchers have consistently shown adverse health effects such as stress, anxiety, and cardiovascular disorders (Peterson, 2018; Vermote et al., 2022). Mental health effects like stress and depression are prevalent in custodial grandparents (Fokakis et al., 2020). Overall, custodial grandparents may perceive raising a grandchild as a cumbersome burden, which may be characterized by high rates of sleeplessness, exhaustion, depression, stress and anxiety, emotional problems, and sometimes chronic conditions such as diabetes and high blood pressure (Yalcin et al., 2018). Grandparents may also be deprived of a sense of privacy and left with little time for self-care (Tang et al., 2022). Fokakis et al. (2020) found that mental health effects, mainly stress and anxiety, are the most fundamental adverse effects on grandparents.

As custodial grandparents assume more responsibilities, they may not have the time for self-care to engage in sedentary behavior and physical activities (Vermote et al.,

2022). For instance, Taylor et al. (2017) affirmed that grandparents with low income and limited respite care support have a tendency of postponing their health needs to provide care to children in their custody. Taylor et al. observed that grandparents are often worried about their grandchildren while in respite care placement and may feel guilty for abandoning their children. Tompkins and Vander Linden (2020) asserted that custodial grandparents also feel some guilt for the failure of their children in being unable to raise their children. Custodial grandparents may experience feelings of stress and anxiety as they struggle to make multiple decisions on raising grandchildren, such as booking and visiting social workers, registering their grandchildren for school, and making decisions regarding everyday costs (Clark et al., 2022).

These custodial grandparents may also experience loneliness due to their caretaking responsibilities. By taking on such duties, these grandparents may put their social needs aside and are left with little time for engaging with friends (Fokakis et al., 2020). Due to this isolation and loneliness, they may find it difficult to handle physical and emotional obstacles resulting from taking on new responsibilities of caring for grandchildren (Hilton et al., 2022). As a result, grandparents may face high levels of distress, which could lead to severe cases of depression (Tang et al., 2022). Because of this stress, custodial grandparents may have difficulty adapting to new changes in their lives, leading to poor quality of life and children who act out and present behavioral issues (Hayslip et al., 2019). Accordingly, loneliness is evident among these grandparents, who perceive themselves as being alone in this situation compared to their peers, which generates greater stigma and associated stress and depression.

Custodial grandparents caring for children suffering from trauma may end up with complicated health problems due to secondary trauma (Lee & Jang, 2019). This is because most children in their care have been exposed to traumatic events, such as staying with drug-abusing parents, before being removed from their homes (Meyer et al., 2017). In the process of caring for these children, custodial grandparents also encounter trauma and stress (Davis et al., 2020). As noted by Lee and Jang (2019) in a qualitative descriptive study involving 20 respondents, the caregiving stress experiences among custodial grandparents may lead to adverse effects on their mental health. These effects are greater in scenarios in which grandparents have limited social and economic support and a lack of community resources and respite care (Tang et al., 2022). In a different qualitative study with 25 participants, Fauziningtyas et al. (2019) indicated that some custodial grandparents with underlying health problems like insomnia, hypertension, joint aches, and arthritis find it distressing to care for their grandchildren. There are many complex challenges of custodial grandparenting to be addressed with effective and appropriate policy interventions.

Yalcin et al. (2018) conducted a study in Turkey on older women over the age of 65 to assess the level of depression and quality of life in custodial grandmothers. The researchers found that the study group had higher scores than the test group for all variables of depression, quality of life, and general health perception (Yalcin et al., 2018). The study group scored significantly better than the test group in the perception of depression and quality of life. Based on these findings, caring for grandchildren had a substantial effect on custodial grandparents' quality of life, depression levels, and general

health perception (Yalcin et al., 2018). Similarly, Fokakis et al. (2020) conducted a longitudinal study on the health status of custodial and noncustodial grandparents. The researchers only selected grandparents who were in good health conditions before providing custody and caring for grandchildren to participate in the research (Fokakis et al., 2020). Based on the results, the researchers found that custodial grandparents reported worse health status than their noncustodial counterparts. The researchers attributed the disparity in health conditions to stress levels resulting from grandparenting responsibilities (Fokakis et al., 2020). Fokakis et al. (2020) completed a longitudinal study to determine whether becoming a custodial grandparent had adverse effects on the overall health of grandparents. The researchers found a positive association between becoming a custodial grandparent and health conditions. These results were evident even after accounting for childhood, socioeconomic status, and health conditions. Peterson (2018) conducted qualitative in-depth face-to-face interviews with 22 grandparents raising adolescents to assess their health status before and after assuming care for grandchildren. These custodial grandparents reported being in good health before caring for their grandchildren; however, the grandparents reported that after taking on the primary caregiving role, they experienced changes in their health (Peterson, 2018). The changes were significant and required medical intervention. The grandparents reported issues with anxiety, worry, sadness, depression, and frustration. When compared to grandparents who do not have any obligation to cater to their grandchildren, grandparents acting as custodial grandparents are prone to extensive health complications (Yalcin et al., 2018).

Stress and Anxiety in Custodial Grandparents

A lack of formal and informal support and resources needed to provide effective care to children in their custody is a challenge and a source of stress for custodial grandparents (Hilton et al., 2022). Because of the burden associated with grandparenting, grandparents experience stress that may culminate into mental health problems (Smith et al., 2016). Smith et al. completed a qualitative descriptive study involving 15 purposively selected participants to determine whether grandparents experienced stress after taking on the responsibility of serving as custodial grandparents for their grandchildren. The authors found that the grandmothers suffered from depression and reported seeking mental health support for their personal needs. Upon further examination, the researchers also discovered that the grandmothers suffered from declining health. Similar research by Whitley and Fuller-Thomson (2018) revealed a high risk of stress and anxiety among custodial grandparents, which they linked to a lack of social support and inadequate financial resources.

Lee et al. (2016) completed a sequential explanatory mixed-methods study focused on sources of stress in grandparents and kinship providers. The researchers found that custodial grandparents experienced elevated levels of stress compared to other kinship providers. The researchers also found that the main factors causing stress were financial strains, concerns about children's behavior, learning how to work with child services, and experiencing difficult relationships when trying to get along with the birth parents (Lee et al., 2016). Taking the unexpected role of grandparenting is a stressor because they are often placed in the primary caregiver's role with no prior notice or

necessary social and financial support (Lent & Otto, 2018). Grandparents take on the new stressful roles of overseer, provider, and protector of their grandchildren, whether they are equipped or not (Lee et al., 2016).

Whitley et al. (2016a) conducted a quantitative study to evaluate the relationship between depression and mental health quality as mediated by social support. The researchers found that social support was the most effective mediating factor for addressing stress and improving the mental health of custodial African American grandmothers. Whitley et al. placed all the grandmothers in a 12-month support intervention to assess stress-related issues generating psychological distress and depression in custodial grandparents. The researchers reported the significant correlation between social support and stress levels and mental health of custodial African American grandmothers in older participants; however, this correlation was not present in the younger group of participants. These findings align with Mendoza's (2018) affirmation that social support can reduce social stigma and associated distress levels in custodial grandparents.

Experts have shown that custodial grandparents caring for children who have behavioral issues, drug addiction, poor education, and lack of discipline experience higher levels of stress than other custodial grandparents (Fokakis et al., 2020; Lent & Otto, 2018). Some children are exposed to traumatic events such as staying with drug-abusing parents before being removed from their home (Clark et al., 2022). These children may suffer from posttraumatic stress while under the care of their grandparents (Lee & Jang, 2019; Vermote et al., 2022). The grandparent caring for children with such

issues may develop secondary trauma or suffer anxiety, depression, and stress derived from trying to work through the child's problem areas once placed in their home (Tompkins & Vander Linden, 2020). Grandparents take their grandchildren into their homes without the knowledge of how to relate and deal with the unmet needs of their grandchildren, which may lead to a stressful environment within their home. Davis et al. (2020) similarly observed that custodial grandparents also encounter trauma and stress when caring for traumatized grandchildren. In a similar qualitative descriptive study, Vermote et al. (2022) found that the level of trauma and distress is elevated by feelings of guilt, loneliness, anger, and stress associated with custodial grandparenting. Multiple researchers have demonstrated these mental health effects are prevalent in custodial grandparents (Fokakis et al., 2020; Peterson, 2018). For example, Peterson (2018) affirmed that emergent stress can lead to health concerns, financial burdens, and feelings of despair in grandparents. Adapting to a new lifestyle, such as taking on the parental role of a grandchild, can be traumatic for all parties involved (Hayslip et al., 2020; Lee & Jang, 2019).

Other Challenges Encountered by Custodial Grandparents

Limited social support is one of the key challenges that custodial grandparents face (Rawn et al., 2021). Some custodial grandparents caring for grandchildren depend largely on support received from extended family, friends, and society in general (Hilton et al., 2022; Zhou et al., 2017). Zhou et al. completed a longitudinal study involving 26 participants drawn from rural China and measured financial, emotional, and instrumental support. The researchers found that grandparents with social support fared better than

grandparents who received no social support. Thus, greater social support from family, peers, and community in general is the foundation for better health among grandparent caregivers. Social support in conjunction with better health and reduced parental stress may prevent depression and distress among custodial grandparents (Hansen et al., 2020).

According to Generations United (2017), it is difficult for grandparents to receive family support from the younger generation when their grandchildren are placed in their custody by Child Protective Services (CPS). This is often due to conflict and relationship issues that are encountered between the parent and the grandparent from the grandchildren being placed in their home (Generations United, 2017). Parents may also have a no-contact order for safety reasons that make it hard for grandparents as well (Hilton et al., 2022). Because of these measures, strained relationships may result in the home as well as in the extended family, which consists of paternal and maternal family members (Generations United, 2017). The persistence of this tension leads to psychological distress for the grandparents and behavior issues for the grandchildren (Lent & Otto, 2018). According to Generations United, grandparents raising grandchildren seem to experience a major decrease in their friendship network. A reduced friendship network may lead to loneliness and isolation, which can trigger stigma and distress among caregiving grandparents (Whitley et al., 2016b).

According to Brunissen et al. (2020), custodial grandparents are physically exhausted as they undertake daily chores such as cooking, doing laundry, cleaning, and running errands because of their reduced energy levels due to aging. Much of their time is spent caregiving, and they are left with little to no time for self-care, leisure, traveling, or

interacting with peers, relatives, and members of the community (Hansen et al., 2020). Supporting this assertion, Ungar and Theron (2020) reported that grandparents dealing with traumatized grandchildren suffer from social isolation and loneliness. In a similar qualitative descriptive study, Davis et al. (2020) supported this assertion after evaluating the relationship between childhood trauma victims and stress among caregiving grandparents. The researcher found that children living with grandparents were exposed to trauma before entering the household.

Manns et al. (2017) completed an exploratory study to understand the daily lives of custodial grandparents using a mixed-methods approach with custodial grandparents as participants. The grandparents used a time-use diary to report their daily living for 24 hours. The researchers found that about half of the grandparents raising grandchildren in the sample stated they stopped having contact with friends since taking on the responsibility of raising a grandchild. The researchers also found that despite a high degree of social embeddedness before raising their grandchildren, many grandparent caregivers reported experiencing decreased contact and support from members of their social network. Expanding on this discussion, Lent and Otto (2018) noted that there are several reasons grandparent caregivers' friendship networks decrease. For example, grandparents raising grandchildren may not have the time or financial means for social activities and other interests and hobbies in which they previously used to participate with friends and peers.

Brunissen et al. (2020) affirmed that, in general, grandparents expect to live a life devoid of child caring responsibilities after their children are grown. Because of their new

responsibility, they have less time to socialize with peers, thus leading to loneliness (Davis et al., 2020; Lent & Otto, 2018). Consistent with these findings, Hayslip et al. (2019) stated that loneliness and isolation can trigger stress and depression. These findings are concerning because researchers have linked social isolation to a reduction in quality of life as well as a functional decline in physical abilities (Brunissen et al., 2020; Manns et al., 2017). Supporting this observation, Hayslip et al. and Dunn and Wamsley (2018) affirmed that in various instances, it is common for custodial grandparents to purposely avoid social occasions because those around judge them for their new lives. Such negative public social interactions only add to their burdens. Being with acquaintances or family members allows grandparents a chance to have time to read a magazine, garden, travel, or otherwise unwind (Hilton et al., 2022). These grandparents may partake in these activities to lead a happy and quality life; however, due to overwhelming responsibilities, they do not have time for any social occasions that may help to reduce their stress (Lee & Jang, 2019; Zhou et al., 2017). Supporting the benefits of social interactions among the grandparents, Lent and Otto (2018) and Vermote et al. (2022) noted that custodial grandparents use online social networks for much-needed social support. These grandparents use social networks to interact and maintain a close relationship with peers, family, and community members while simultaneously serving the needs of grandchildren in their custody.

Access to Resources by Custodial Grandparents

Due to inaccessibility to sufficient resources from the government and community, custodial grandparents may be unable to provide effective care to

grandchildren (Hansen et al., 2020). Lack of resources to provide for their grandchildren's needs is a key challenge and a source of stress for custodial grandparents (Clark et al., 2022). The resources include both formal and informal resources necessary for supporting custodial grandparents and grandchildren in their custody (Fernandes et al., 2021). Formal resources include different forms of support given to custodial grandparents, such as after-school programs, educational programs, summer camps, respite care, and transportation (Brunissen et al., 2020). Informal resources include community support, assistance from family and friends, and support offered by churches and other entities (Brunissen et al., 2020; Collins & Feeney, 2000; Tompkins & Vander Linden, 2020). Financial resources include food stamps, financial housing assistance, bill payment support, or payments received directly from the government that match foster care grants and clothing vouchers (Generations United, 2017). Access to these resources has remained elusive for most caregiving grandparents, thus adversely affecting the delivery of necessary services to grandchildren in their custody.

Grandparents tend to need more information about resources available for and related to caring for their grandchildren when compared to kinship providers and foster parents. Grandparents in rural communities encounter problems, such as their inability to access resources and having minimal access to family and friends for their support (Wamsley & Dunn, 2018). In rural communities, transportation has also become a substantial problem. Grandparents also struggle with handling their grandchildren's educational needs. Programs are necessary so that grandparents may learn how to interact with their grandchildren's educators and administrators (Brunissen et al., 2020; Polvere et

al., 2018). These programs may include support groups to help grandparents care for the children at home (Clark et al., 2022). In rural communities, the programs offered for grandparents serve multiple counties with resources, creating minimal access.

Grandparents who intervene and care for their grandchildren before CPS is involved have minimal access to government resources (Generations United, 2017). Based on the CPS policy, grandparents are not allowed to care for children in their custody, as it is considered illegal. Grandparents aged 65 or older are also not allowed to care for children. Thus, older grandparents who have the stability and home to offer to their grandchildren but require additional support experience problems (Generations United, 2017). A lack of knowledge regarding where to obtain financial and social support may lead to compounding issues, leading to distress (Kelley et al., 2021). Most grandparents have no access to information on available resources which can be easily accessed through the internet (Teerawichitchainan & Low, 2021). This population is not Internet savvy and may not be able to access this information on their own (Polvere et al., 2018; Tompkins & Vander Linden, 2020). Rather, professionals are responsible for offering geriatric services to educate these individuals and provide a referral to community and online social support groups.

There are multiple formal programs that grand families may partake in for support. For instance, Fruhauf et al. (2015) conducted a qualitative study with 23 participants with a focus on 16 programs that offer assistance to grand families. The researchers sought to identify program needs related to custodial grandparents. Based on the results, the researchers found that several programs such as foster care

reimbursements, Temporary Family Assistance, and guardianship subsidies are in place to help grand families. Supporting this assertion by conducting a qualitative descriptive study with 22 participants, Pandey et al. (2019) affirmed that connecting older custodial grandparents to community resources improves the resiliency of grand families as well as the self-efficacy of the grandparent caregivers. Dunn and Wamsley (2018) observed that there are different types of financial support programs offering support to grandchildren, and custodial grandparents may be eligible to receive funds from financial support programs but are required to have a flexible plan and comply with legal requirements to qualify. Commenting on this issue, Pandey et al. (2019) affirmed that grandparents find it hard to trust the department of social services in fear of losing their grandchildren.

The financial programs available to the custodial grandparents include insurance benefits and financial assistance programs (Miller & Donohue-Dioh's, 2017; Teerawichitchainan & Low, 2021). Miller and Donohue-Dioh focused on 105 kinship caregivers to examine the needs of these families. The results indicated that grand families with non-formal custody had limited access to financial support and legal assistance. The researchers also identified eight distinct formal and nonformal areas of need, including economic, permanency, legal, counseling, family and peer support, training, public outreach, and the need for supplemental resources (Miller & Donohue-Dioh, 2017). Based on the findings, Miller and Donohue-Dioh concluded that grandparents who gain custody without the support of CPS and a family court have little or no access to resources. The researchers made this conclusion based on the assertion

that most grandparents are ineligible for financial support, or there is a lack of resources dedicated to grand families (Pandey et al., 2019; Polvere et al., 2018).

Researchers indicate that taking up grandchildren compels some grand families to change their living arrangements to secure housing that can accommodate their grandchildren (Dunn & Wamsley, 2018; Polvere et al., 2018). For instance, Polvere et al. conducted a qualitative study involving 30 grandparent caregivers, grandchildren, and key individuals with knowledge of the needs of this population. In this study, the researchers identified several needs to address family demographics. For instance, they found that grandparents taking in their grandchildren suffer from poverty and do not have the means to secure adequate housing, and some may need special accommodations. Tompkins and Vander Linden (2020) conducted a qualitative descriptive study involving 25 participants and found that the burdensome application process becomes a challenge for grandparents due to not having the correct paperwork, such as birth certificates and social security cards, to receive benefits. The researchers found a lack of sustainable housing for custodial grandparents to meet both the needs of the grandparents and the children who reside in their home (Brunissen et al., 2020; Lent & Otto, 2018). Based on this finding, there is evidence of limited access to housing, which is one of the major resources necessary to ensure sustainable shelter for these families.

Summary and Conclusion

In the literature review, I synthesized what has been documented by scholars on the study topic on the relationship between custodial grandparents and stress. I used Selye's stress theory as the guiding theory, including its relevance and applicability to the

custodial grandparents and related stress and anxiety. Selye argued that whenever a person experiences stress, they are taken off guard at first before attempting to maintain homeostasis by resisting the change and eventually become a victim of exhaustion as they counter the stressful situation (Selye, 1965). Researchers have previously applied Selye's stress theory to conduct research on stress management. Researchers use stress theory to assess formal and informal resources to better understand whether these factors are causing stress for custodial grandparents in Appalachia.

Next, I presented a review of literature related to custodial grandparenting and stress and the impact of limited social support and inadequate resources on caregiving grandparents. I demonstrated that stress and custodial grandparents are directly and substantially linked variables. Previous researchers have linked custodial grandparenting to stress and poor physical and mental health. Limited social and financial support is one of the key stressors for custodial grandparents (Rawn et al., 2021). Grandparents' ability to care for their grandchildren heavily depends on whether they receive physical, emotional, or material support to help them cope with their new responsibilities. If grandparents are unable to adapt, they may end up distressed due to the challenging roles of caring for their grandchildren. Researchers have revealed that custodial grandparenting is linked to adverse physical and mental health effects (Taylor et al., 2017; Xu et al., 2020). The burden associated with grandparenting may lead to stress that may culminate in mental problems (Smith et al., 2016). There are many complex challenges of custodial grandparenting to be addressed with effective and appropriate policy interventions.

Dealing with traumatized children is a challenge for custodial grandparents. Custodial grandparents providing care for children who have encountered trauma attest to the fact that these children become more challenged later in life. Custodial grandparents may experience numerous changes in their lives that result from their new responsibilities. If they do not have ample support, custodial grandparents have less time to cater to their own needs as they prioritize their grandchildren. As the number of custodial grandparents continues to rise, there is a greater need for social reform to help this population of individuals cope. Grandparents need more innovative ways of handling the changes resulting from their obligations to act as parents for a second time. Unfortunately, most grandparents find their new responsibilities too challenging because they have no adequate support system to help them adapt.

Nonetheless, the purpose of this quantitative nonexperimental correlational study was to examine the predictive relationships that exist between stress and custodial grandparents' utilization of various (formal, informal, and financial) resources in Appalachia. I gathered quantitative information regarding how the utilization of formal, informal, and financial resources is related to the emergence of stress in custodial grandparents. After conducting a review of the literature, I identified the knowledge gap and addressed the research problem of high-stress levels among custodial grandparent caregivers in Appalachia due to limited resources and social support to care for their grandchildren. Accordingly, researchers have confirmed a link between social support and financial resources with stress levels in caregiving grandparents. This aspect remains unexplored in the impoverished Appalachian territory.

Chapter 3 includes a discussion of the methodology as well as a description of how I achieved my objective and addressed the gap highlighted in this chapter. In Chapter 3, I discuss the research design in close reference to the data collection instruments that I used in this study. The procedure for recruiting the research participants is also described in Chapter 3.

Chapter 3: Research Method

Introduction

The purpose of this quantitative, correlational approach study was to examine the degree to which access to family support and family resources is related to parental stress experienced by custodial grandparents in Appalachia. In conducting this study, I was able to obtain information regarding how the utilization of available resources and social support can be leveraged to address custodial grandparents' stress. In the first section of this chapter, I outline the research design and approach that were used in the study. In the second section, I describe the specific sampling strategy and the setting in which the research was conducted. The third section includes a description of the instruments that were used to collect quantitative data. The data collection and data analysis procedures are explained in the fourth section. The fifth section of Chapter 3 includes details of the ethical considerations and guidelines that were followed to protect the anonymity of participants. The final section includes a chapter summary.

Research Design and Rational

I adopted a quantitative correlational study design as the guiding approach in conducting this research. The quantitative method was best suited in this study to collect quantifiable data that can be subjected to statistical analysis to determine the correlation between independent and dependent variables. I designed this study to conduct statistical analysis for testing the research hypothesis. A correlation analysis is a statistical design used for testing the relationship between two or more quantitative variables (Frankfort-Nachmias et al., 2015; Ruthberg & Bouikidis, 2018). A nonexperimental design does not

lead to established causal relationships between the treatment on the experimental group. Rather, only one group of custodial grandparents participated in the study. There was neither an experimental nor control group of custodial grandparents in this research. The variables were continuous for correlation analysis to determine the relationship between study variables. The variables of interest that were analyzed from a single group of custodial grandparents included family resources, family support, and parental stress .

In correlation designs, researchers can either adopt cross-section or longitudinal surveys to collect data. A cross-sectional approach is used to collect data on the variables of interest at one single time from the participants (Patton, 2018). On the contrary, the longitudinal approach is relevant in studies that collect data from participants over a period of time to assess the effects of the intervention (Ruthberg & Bouikidis, 2018). I used a cross-sectional design to obtain information from the targeted population for analysis at a single point in time. I sought to collect data from a cross-section of custodial grandparents at a single point in time to assess the relationship between variables.

Surveys are a useful tool for collecting data from a large population in a short time (Leavy, 2017). I used self-administered questionnaire surveys to collect data from a large sample of participants because they are less costly tools for collecting data. A quantitative correlational cross-sectional research design was the most appropriate to collect numerical data, measure more than two variables, and collect data from participants at one point in time with a survey (Frankfort-Nachmias et al., 2015). The independent variables were family resources and family support. The dependent variable was the parental stress level. The control variable was the age of the grandparents.

In contrast to the method that I chose for this study, the qualitative method is relevant in studies in which researchers seek to collect non quantifiable data for thematic analysis rather than statistical analysis (Hennink et al., 2020). I did not seek to gain systematic descriptions from custodial grandparents on challenges they encounter in caring for grandchildren. Rather, I sought to determine the relationship between dependent and independent variables.

Methodology

Population

The targeted population for this study was grandparents who provide custodial care to at least one grandchild without the presence of their biological parents. The population from which I recruited a sample of participants was grand families in West Virginia. West Virginia is located in the Northern Appalachian region of the United States. The population in this area of West Virginia consists of approximately 23,409 grandparents who provide care for their grandchildren (AARP, 2019). West Virginia has been ranked as the state with the second-highest number of grandparent-headed households in the United States (United States Census Bureau, n.d.). The Appalachian area of West Virginia has also been consistently identified as having high levels of poverty (ARC, 2021b). Appalachia's average household income is 80% of the U.S. average. The per capita income of \$24,302 places residents 17.1% below the U.S. average income (ARC, 2017). In Appalachia, 24.4% of children and 9.5% of adults 65 years of age or older live below the poverty level (ARC, 2021b).

Sampling and Sampling Procedures

The sampling frame for this study was custodial grandparents raising at least one grandchild living in Appalachia. I recruited participants using a nonprobability purposive sampling process. Nonprobability purposive sampling is used to recruit participants who are a representative sample of the targeted population (Ruthberg & Bouikidis, 2018). Researchers use a nonprobability design because it is convenient and is cost-effective (Ruthberg & Bouikidis, 2018). The purposive sampling technique was used to recruit participants that are relevant for the study.

In the context of this research, I used purposive sampling to obtain custodial grandparents who have no access to formal and informal resources and also lack the social support needed to meet the caring needs of grandchildren (Vehovar et al., 2016). I used snowball sampling to ensure the minimum research requirements of 77 individuals were recruited. In the snowball sampling method, participants refer other individuals who fit the inclusion criteria (Ruthberg & Bouikidis, 2018). I asked the recruited grandparents to refer to other grandparents who would be willing to participate in the study. The referral included providing the name and email contact of the prospective participants. By using the snowball method, I was able to obtain grandparent participants that otherwise may have been hard to locate. Participants provided referrals of other grandparents who do not participate in service programs directed toward helping grandparents raise grandchildren.

Sample Size

I applied a G-power analysis to obtain the minimum sample size for a statistical methodology for the quantitative research. To arrive at the sample size necessary for this research, I specified the significance level, required power of hypothesis tests, and effect size of the estimated model or parameters (Faul et al., 2009). The significance of the test specifies the acceptable probability that the null hypothesis will be rejected when it is true. In this research, I used G* Power 3.1.9.7, a free downloadable software, to determine the appropriate sample size of grandparents needed. I made this determination based on the predesigned effect size, alpha, and power level (Faul et al., 2009). The parameters I used to calculate the minimum sample size consisted of a conventional level of .80, and an alpha level of .05. Using the demographic information provided by Generations United (2021) and G Power 3.1.9.7 for calculation, I determined the minimum sample size to be 77 with a margin of error of .05 and a confidence level of .95.

Procedure for Recruitment and Participation

I obtained approval from Walden's IRB to conduct this study. In addition, I contacted West Virginia State University Healthy grand families and Relatives as Parents (RAP) to ask if I may recruit participants by advertising the study on their website and bulletin boards. I obtained a letter of support from each program and included them in the IRB application.

I used a flier placed on the website and bulletin board of each of these organizations to invite custodial grandparents to participate in the research as participants. The flier included a link to the survey and informed consent was created to

recruit the study participants. I posted this flier on both the website and the bulletin board. The potential participants were asked two questions to determine their eligibility. The first question was: Are you the custodial caretaker of grandchildren? If they indicated they are a custodial grandparent, the following question was asked: Do you live in West Virginia? The potential participants who clicked “yes” to both questions and signed the consent form were directed to the survey questions. The survey was divided into two sections: Section A and Section B. Section A contained the demographic questions while section B included survey questions.

I set up SurveyMonkey to track the email addresses of respondents to track who had sent back their surveys via email. The participants had 30 days to complete the required queries. I used the analyze results section of the survey under the individual responses tab to check who had responded to the survey. After 30 days, I sent out a friendly reminder to all participants who have internet access to complete the surveys. I continued to collect data for 90 days or until I received a minimum of 77 complete responses. After the study was completed, I shared the results with leaders and professionals who support grand families. I also shared a summary of the results with participants upon their request through email or physical mail.

Instrumentation and Operationalization of Variables

I asked participants to complete three existing surveys. The three surveys included the Family Resource Scale (FRS), the Family Support Scale (FSS), and the Parental Stress Index – short form (PSI-SF). A description of each instrument and its psychometric properties is presented below.

Family Resource Scale (FRS)

I measured the independent variable of family resources with the FRS. Dunst Carl and Hope Leet developed this instrument in 1987. The 5-point Likert-type instrument is used to assess the perceptions of resources that a family possesses for a variety of needs. The instrument includes 30 question items covering a variety of family resources ranging from necessities to disposable income for family travel and entertainment. On the 5-point Likert scale, responses range from 1 = *not at all adequate* to 5 = *almost always adequate* (Taylor, 1993). The FRS is composed of four subscales: general resources, time availability, physical resources, and external support (Taylor, 1993). The participants indicated their level of agreement with items measuring family resources on a 5-point Likert scale. I summed the scores to obtain the total score on family resources. The total score indicates the family resource level accessible by the grandparent, with the highest score of 150 indicative of the optimal family resources which appear in the *almost always adequate* point in the Likert scale (Taylor, 1993). Having optimal family resources based on the FRS means personal well-being and the maternal commitment to carrying out the professional child-level intervention. This is determined through the combined subscale categories of food and shelter, financial resources, time for family, extra family support, childcare, specialized child resources, and luxuries. The well-being ($r = .57, p < .001$) and commitment ($r = .63, p < .001$) scores along with the total scale scores determine these factors. The instrument has been widely used in research to measure the perception of family resources available for various needs (Fuller et al., 2019).

Validity and Reliability of the FRS

The FRS was developed from a study of 28 professionals with backgrounds in working with preschoolers and their families (Dunst & Leet, 1987). Items on the scale were randomly ordered, and each participant was asked to rank the items from the most to the least basic (Dunst & Leet, 1987). In this study, 23 of the 28 professionals took the test again within 2 months to establish the test/retest reliability (Dunst & Leet, 1987). The validity and reliability of the scale were established through a study of 45 mothers of preschool children (Dunst & Leet, 1987). The test was given on two separate occasions 3 months apart, and the reliability was .95 corrected for length. Van Horn et al. (2001) reported that alpha reliabilities ranged from .72 to .84 when sampling a group of parents with preschoolers in Head Start. Any score of more than .70 on Cronbach's alpha implied that the items of the instruments were reliable measures of perception of family resource adequacy. The internal validity of the instruments refers to the generalization of results based on the instrument to external events or populations. Evidence of external and predictive validity of this tool was also established in this study (Van Horn et al., 2001). The external validity of the FRS was established by retesting with the same population in a repeated study, which showed consistent results. Predictive validity was established using correlation analysis and a coefficient for the total scale, $r = .52, p < .001$ (Dunst & Leet, 1987). This coefficient indicated that this scale was a moderate measure of family resources, at a 1% margin of error.

Family Support Scale (FSS)

The independent variable family support was measured by the Family Support Scale (FSS). The FSS was developed to measure a person's perceptions of the helpfulness of support they receive in raising children (Dunst et al., 1984, p. 46). Dunst et al. developed the FSS to measure perceived levels of support from family, friends, social groups, and professional service providers. The FSS is an 18-item questionnaire that uses a 5-point Likert scale, ranging from 1 = *not at all helpful* to 5 = *extremely helpful* (Dunst et al., 1984, p. 47). The participants were scored by indicating their level of agreement with items measuring family support on a 5-point Likert scale. The scores were summed to obtain the total score on family resources. The total score was an indicator of the total level of family support received by the grandparent, with the highest score of 90 indicating the highest level of family support. A total score of 0-30 represents low family support, while 31-60 indicates moderate support (Dunst et al., 1984, p.47). A score of above 60 represents a high level of family support received from family and relatives toward grandparents .

Validity and Reliability of the FSS

Researchers gave the FSS 1 to 2 years apart to 60 different participants of the same population to evaluate the test-retest validity of the instrument (Dunst & Leet, 1987, p. 112). The authors found an average $r = .52$ ($SD = .15$) for the 18 separate items and $r = .60$ for the total scale. The researchers deemed the test as being reliable for detecting stability in social support relationships over a significant length of time (Dunst & Leet, 1987). In a study of 224 parents of children who were at risk for declining health and

suffering from disabilities, Dunst and Leet (1987) examined the validity and reliability of the scale (p. 113). The researchers found the coefficient alpha computed from the average correlations from the 18-item questionnaire to be .79 and the split-half reliability to be .77 (Dunst & Leet, 1987, p. 116). When reporting social support among kinship caregivers, researchers have found the FSS to be reliable (e.g., Littlewood et al., 2012). In addition, the researchers found a variance of 50.40% among four component structures reported from the analysis. Littlewood et al. (2012) also reported the alpha for the FSS as .799. This was indicative of the acceptable level of internal consistency for the scales when administering to a sample of kinship providers (Littlewood et al., 2012). In this study, the researchers found the coefficient alpha computed from the average correlations from the 18-item questionnaire to be .80. This value was close to the instruments' original Cronbach alphas, affirming the validity and reliability of the data source.

Parental Stress Index – Short Form (PSI-SF)

I measured the dependent variable of parental stress using the Parental Stress Index – Short Form (PSI-SF). Abidin developed this survey in 1990 as the PSI to measure parenting stress (Abidin, 1995). The PSI-SF is a 36-item questionnaire derived from the PSI, which includes 120 items. Abidin created the PSI-SF to more effectively measure parenting stress (Abidin, 1995). The PSI-SF can be used to measure the relationship between parenting and stress (Aracena et al., 2016). The PSI-SF consists of the following three subscales: (a) parental distress (PD), (b) parent-child dysfunctional interaction (P-CDI), and (c) difficult child (DC) (Abidin, 1995). The PSI-SF includes a 5-point Likert scale to assess participants' levels of stress, from 1 = *strongly agree* to 5 =

strongly disagree, where the higher score represents a greater level of stress (Ross, 2004). The participants are scored by indicating their level of agreement with items measuring parental stress level on a 5-point Likert scale. I summed the scores to obtain the total score on family resources. The total score is an indicator of the total level of stress of the grandparent, with the highest score of 90 indicating the highest level of stress. In examining the subscales individually, the PD determined whether the grandparent is experiencing stress due to personal factors related to parenting (Ross, 2004). I used the instrument to identify stresses associated with the lack of formal, informal, and family resources (Ross, 2004). According to the methodology used to interpret the results, when the PD subscale is in the 90th percentile and the P-CDI and DC is in the range of the 75th percentile, the grandparent source of stress is due to filling the role of being a grandparent and not due to grandparent-grandchild relationship (Ross, 2004).

Validity and Reliability of the PSI-SF

I established the validity and reliability of the PSI-SF using test and retest and Spearman correlation analysis. Abidin indicated that the PSI is a reliable tool for measuring parental stress both over time and internally (Abidin, 1995). Abidin determined the Cronbach alphas from a sample of 800 parents in a study (Abidin, 1995). Abidin gave the test 360 days apart, with a reported reliability of .84 for the total stress. The subscales in the study ranged from .85-.68, indicating that all items are reliable measures of parental stress (Abidin, 1995). Abidin determined the internal consistency was determined by testing 103 parents of children in Head Start programs. Cronbach's alpha produced a total stress of .90, and the subscales ranged from .80-.79 (Abidin,

1995). Researchers have reported high internal consistency for both the total scale and three subscales. They reported the following: Cronbach's $\alpha = .92$ for the total scale, .89 for the parental distress subscale, .89 for the PCD-I, and .88 for DC. They retrieved these results after assessing a sample of 336 dyads. In addition, the researchers found a positive and statistically significant correlation to be .86 between parental stress (Aracena et al., 2016). Due to these findings, I verified construct validity in this study as well. In the current study, I identified the coefficient alpha from all the items for measuring stress to be 0.82. This value is close to the instrument's original Cronbach alphas, affirming the validity and reliability of the data source.

Demographic Instrument

I provided a demographic questionnaire (see Appendix A) along with the survey, which I shared as a link. I asked participants about their age, race, gender, marital status, and household income.

Data Collection

After obtaining approval from the IRB, I began the process of collecting data. I administered a demographic questionnaire and survey through SurveyMonkey to collect data from recruited participants. The potential participants who opened the link in the recruitment flyer first read the study inclusion criteria. Those who agreed that they met the inclusion criteria by clicking "yes" then completed a screening demographic questionnaire and the three surveys, including FRS to collect data on family resources, FSS to collect data on formal and informal social support, and the PSI for gathering data

on parental stress. The purpose of the screening questionnaire was to obtain critical information to determine the eligibility of the participants.

The participants had a maximum of 30 days, or until I received a minimum sample size of 77 completed responses, to complete the materials. I downloaded the collected data to a secured personal smartphone and backed up on the cloud using a password. I sorted the collected data from the demographic questionnaires and published instruments into Excel for analysis using the SPSS program.

Data Analysis

I entered participants' completed survey and demographic responses into SPSS Software Program Version 24. I used the program to generate and analyze the data.

Missing Data

I sorted the collected data from the demographic survey, FRS, FSS, and PSI-SF tools into Excel format and imported the data into SPSS Program Version 24 for prescreening. Missing data may affect the outcome of the research, which reduces the strength and credibility of the conclusion. I determined the missing values for each variable using multiple imputation commands under analysis. I administered a frequency count for every variable to determine missing data. As asserted by Strijker et al. (2020), missing 5% of data is inconsequential and acceptable in any research. Thus, I omitted missing cases and analyzed the remaining data.

Checking for Outliers

I conducted a normality test on the collected data to determine if the normality assumption was met. The assumption of normality of the data set is required in

parametric analysis involving linear regression and Pearson correlation analysis. I established the skewness and kurtosis of data using normality plots and histograms for each of the study variables. Box plots are commonly used to reveal any outliers in the data sets for possible removal before conducting inferential statistical analysis based on Pearson correlation and regression analysis.

Testing Statistical Assumptions

Researchers must address multiple statistical assumptions in linear regression and Pearson correlation analysis. The first assumption is that variables of interest have continuous data to be analyzed using these tests. The age of participants was a mediating variable, family resources and social support were continuous independent variables, and parental stress was the dependent variable; thus, this assumption was met. Secondly, the normality of data is another assumption for using multiple regression analysis. I used box plots and histograms to identify outliers in the data before statistical analysis (Field, 2013). It is also assumed that errors that exist between observed and predictive values are normally distributed. Data used to perform regression and Pearson analysis do not exhibit multicollinearity, which occurs when there is a high correlation between independent variables (Field, 2013). I discussed the reliability and validity of the data collection instruments in the previous section.

Research Question and Hypotheses

The research question that guided this research is presented below:

Research Question (RQ): Is there an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age?

Alternative Hypothesis (H_1): There is an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age.

Null Hypothesis (H_0): There is no association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age.

I used Pearson's correlation to determine the strength and direction of relationships between family resources and family support with parental stress experienced by custodial grandparents. The coefficient r in the Pearson correlation indicates the strength as a weak, moderate, or strong positive or negative relationship between variables of interest. A two-tailed test is used in correlation analysis to determine a line of best fit through data of two variables, and r indicates how far these data points deviate from the line of best fit (Field, 2013).

In addition to Pearson's correlation, I used multiple linear regression analysis to determine the strength, direction, and significance of the relationship between one dependent variable against multiple independent variables with the age of grandparents as a mediating variable. Stress was regressed against social support and resources with a significance level set at 5%. This means that a significance level greater than 5% implies

the relationship is not significant, and values less than 5% indicate a significant relationship between variables.

Threats of Validity

Threats to External Validity

Threats to external validity may lead to reduction in the generalizability of study findings to another population or event (Baldwin, 2018). External validity refers to the extent to which the results of the study can be transferred to a broader population, events, and situations beyond the study. A threat to external validity is mitigated using a real-life setting of the population under study (Leedy & Ormrod, 2010). The selected sample for the research must be representative of the broader population to which the findings will be generalized for findings to be replicated in different contexts. In the present research, the threat to external validity included the poor economic condition of the Appalachia grandparents. The findings may not reflect participants of higher-income status.

Threats to Internal Validity

Internal validity describes the ability of the researcher to generate credible and accurate conclusions and relationships of variables of interest based on the chosen design and the data collection methods (Baldwin, 2018). Threats to internal validity may lead to the reduction of the credibility of the study findings. Researchers may reduce these threats by selecting the right methods, designs, and procedures used to guide the conduct of the research. I took relevant steps to eliminate any other explanations different from the results observed from correlation and regression analysis of variables under consideration. Internal validity is critical in experimental studies as well as

nonexperimental studies having other factors that can generate the same observations as those measured by the variables (Leedy & Ormrod, 2010). To mitigate misinterpretations, I based all conclusions on the correlations and regression analysis between variables.

Construct validity also refers to how well the constructs of research represent the study phenomenon (Balnaves & Caputi, 2001). The instruments of data collection included the FRS, FSS, and PSI-SF. Researchers have established the validity of these instruments in prior studies. In addition, I clearly defined the variables of interest in the study alongside independent and dependent variables for accurate results. The variables of interest are also supported by theories including Selye's theory of stress.

Ethical Consideration

Research ethics refer to the principal standards, values, rules, and agreements essential in researching the betterment of human well-being (Resnik, 2018). Researchers must follow ethical guidelines and considerations to protect participants from physical and psychological harm that could result from their involvement in the study. I followed several steps to ensure the protection and ethical treatment of human participants. I followed the guidelines set forth by the Walden University IRB according to ethical standards when working with human subjects. I sought approval from Walden University's IRB to gain their permission before recruiting participants for the study. I contacted administrators of West Virginia State University Healthy grand families and Relatives as Parents (RAP) to permit the use of their physical and online sites to be used to invite grandparents to participate in the research (Resnik, 2018). After obtaining these approvals, I sent out the informed consent to the target population with information on

the nature and purpose of the study. The consent form included an explanation of the voluntary nature of the study, possible risks and benefits, and anonymity and confidentiality of names and information collected from participants. I omitted any identifying information from questionnaires, such as real names and addresses, to fulfill IRB requests for confidentiality. Participants could withdraw at any time during the research without prior notice and with no negative repercussions. I did not use incentives to attract participants. I secured the collected data on smartphones and cloud storage using a password. I will keep the collected data for 5 years and will then destroy all data.

Summary

Chapter 3 included a discussion of the research methods and design as well as procedures that I followed to conduct this study. I discussed and justified the research method and design, the population and sampling methods, the recruitment procedures, and the instrumentation used to collect data. I also discussed data analysis approaches, threats to validity, and ethical considerations. The purpose of this quantitative nonexperimental correlational study was to examine the degree to which access to resources is related to the stress experienced by custodial grandparents in Appalachia. A quantitative correlation is a statistical design used to provide measures for testing the relationship between two or more quantitative variables from a single group of participants. The independent variables were family resources and family support. The dependent variable was the parental stress level. Finally, the control variable was the age of the grandparents. The sampling frame for this study included custodial grandparents raising at least one grandchild living in West Virginia. I used purposive sampling to

recruit custodial grandparents who have no access to formal and informal resources and also lack the social support needed to meet their needs in caring for their grandchildren. I used three existing validated instruments: the FRS, the FSS, and the PSI-SF. I used SPSS software for statistical analysis to perform Pearson's correlation analysis and regression analysis. I adhered to all ethical considerations to protect the participants from any physical or psychological harm. Chapter 4 includes the data collection process, sample population demographics, and the analyzed results.

Chapter 4: Results

Introduction

The purpose of this quantitative nonexperimental correlational study was to examine the predictive relationships between custodial grandparents' use of family resources (formal such as medical arrangements and financial) and family support (informal) on grandparents' stress. The independent variables of this study were the family support and family resources received by the custodial grandparents, and the dependent variable was the level of parental stress experienced by custodial grandparents in Appalachia. I recruited a sample of custodial grandparents who are raising their grandchildren on a full-time basis for the study. I analyzed survey responses of participants statistically to determine the relationship between the utilization of family support and family resources and levels of parental stress among custodial grandparents. Specifically, I sought to answer the following research question:

Research Question (RQ): Is there an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age?

Alternative Hypothesis (H_1): There is an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age.

Null Hypothesis (H_0): There is no association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age.

This chapter includes a presentation of the descriptive statistics of demographic characteristics and study variables. This chapter also includes the results of assumptions testing as well as the results of the statistical analyses to address the research question of this study. This chapter concludes with a summary of the key findings of the data analyses conducted in this study.

Data Collection

After obtaining approval from the IRB, I began data collection. Participants who were interested in taking the survey accessed a link provided on the flier. The link directed them to the screening questionnaire to obtain critical information that was used to determine their eligibility to participate in the study. For participants who did not have internet access, the flier advised them to contact me via phone. When contacted, I asked two questions to determine whether they qualified to participate in the research. Once I made this determination, I obtained the participants' address and mailed out consent, demographic questionnaire, and three surveys via the United States Postal. The three surveys included the FRS to collect data on family resources, the FSS to collect data on formal and informal social support, and the PSI-SF for gathering data on parental stress. After mailing out all documentation, I shredded the addresses.

I allowed the participants a maximum of 90 days to complete the materials, or until I received a minimum sample size of 77 completed responses. I sent a reminder email to participants who had internet access after 30 days from the initial email to help improve the response rate. I administered the questionnaire via SurveyMonkey to collect data from recruited participants. I downloaded the collected data to a secured personal

smartphone and backed up on the cloud using a password. I sorted the collected data from the demographic questionnaires and published instruments in Excel for analysis using the SPSS program. After the data collection period, a sample of 81 participants completed the survey.

Demographic Characteristics of the Sample

I obtained a total of 81 complete responses for the study. There were no missing values in the responses of participants. I determined the minimum sample size required for the study to be at least 77 participants based on the G*Power analysis. The frequencies and percentages of demographic characteristics of the participants are presented in Table 1. The majority of the participants were White ($n = 79\%$), and the remaining 21% were Black. Over three-quarters were female ($n = 76.5\%$), while the rest of the participants were male ($n = 23.5\%$). Among the 81 participants, nearly half were married ($n = 42\%$), 34.6% were divorced, and 21% were widowed. About 40% of the participants had incomes below \$15,000, and one-third ($n = 33.3\%$) of participants had incomes from \$35,000 to \$55,000.

Table 1*Frequencies and Percentages of Demographic Characteristics (N = 81)*

		Frequency	Percent
Race	Black	17	21.0
	White	64	79.0
Gender	Female	62	76.5
	Male	19	23.5
Marital Status	Divorce	28	34.6
	Married	34	42.0
	Single	2	2.5
	Widowed	17	21.0
Household Income	0 - 14,999	15	18.5
	15,000 - 20,000	17	21.0
	20,000 - 25,000	5	6.2
	25,000 - 30,000	8	9.9
	30,000 - 35,000	4	4.9
	35,000 - 45,000	12	14.8
	45,000 - 55,000	15	18.5
	55,000 - 85,000	3	3.7
90,000 – plus	2	2.4	

The participants' ages ranged from 46 to 77 years old, with a mean of 59.83 years old (SD = 7.49).

Descriptive Statistics of the Variables

The FSS scores were calculated as the sum of item responses in the questionnaire. Scores can range from 0 to 95. A higher score indicates higher family support. In this study, the mean score was 29.73 (SD = 14.40), indicating that there was low family

support for the participants. The FRS scores were calculated as the sum of item responses in the questionnaire. Scores can range from 0 to 150. A higher score indicates that the participants have more resources to address the variety of needs of grandparent participants. The FRS scores ranged from 46 to 150 with a mean of 101 (SD = 27.75), indicating that the grandparents had an average number of resources for their needs. The PSI-SF scores were calculated as the sum of the item responses on the questionnaire. Scores can range from 36 to 180. For the PSI, a lower score indicates higher stress level for the grandparents. The PSI-SF scores ranged from 91 to 180 with a mean of 124.52 (SD = 25.09), indicating that the stress level of grandparents was moderate.

Table 2

Descriptive Statistics of Age, FSS, FRS, and PSI Scores

	<i>N</i>	Minimum	Maximum	Mean	SD
Age	81	46.00	77.00	59.83	7.49
Family Support Scale	81	2.00	62.00	29.73	14.40
Family Resource Scale	81	46.00	150.00	101.00	27.75
Parental Stress Index	81	91.00	180.00	124.52	25.09

Assumptions Testing

Prior to conducting the regression analysis to examine the association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age, I tested the assumptions of a regression analysis. The first assumption was that the predictor

variables are continuous variables. The predictor variables for this analysis were FSS and FRS scores, which are measured on a continuous scale. The second assumption was that the dependent variable is measured on a continuous scale. The dependent variable in the study was the PSI scores, which are measured on a continuous scale. The third assumption was that there is no extreme outlier in the dataset. I used boxplots to determine whether there were outliers in the data. Based on the boxplots presented in Figures 1 to 3, there were outliers in the FSS scores. Thus, the outlier points were removed from the dataset. There was no outlier in the FRS scores and the PSI scores.

Figure 1

Boxplot of FSS Scores

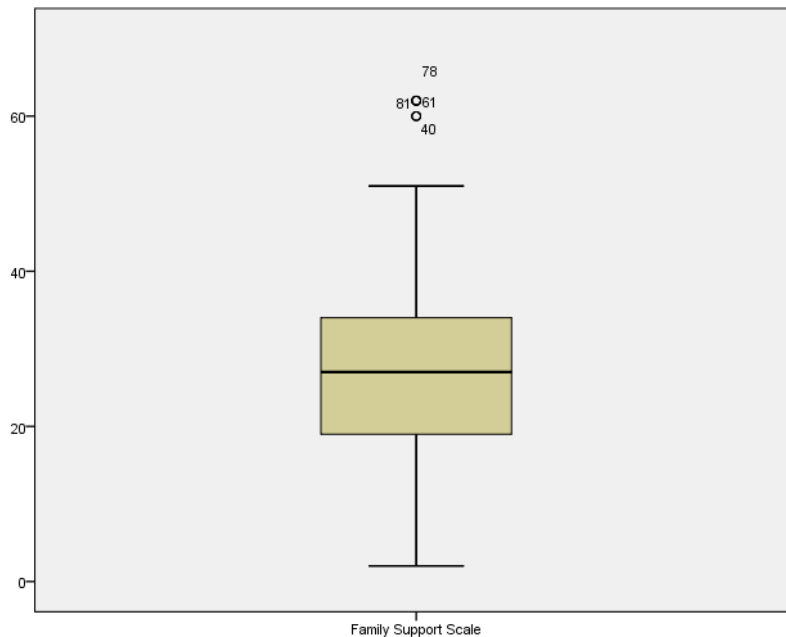


Figure 2

Boxplot of FRS Scores

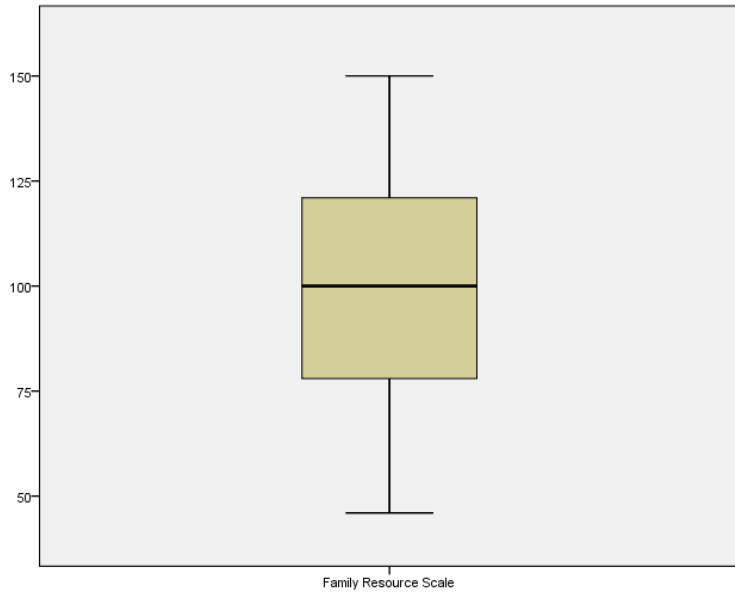
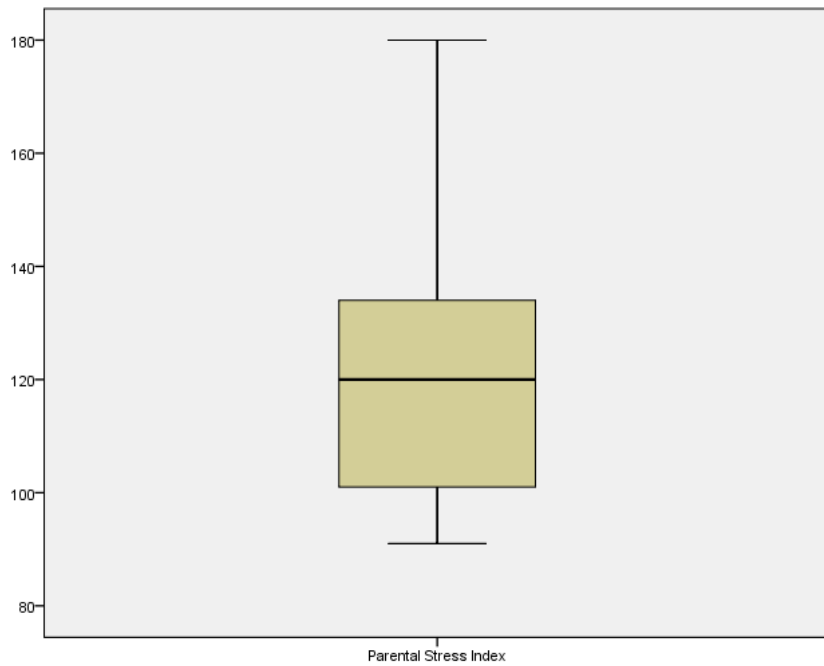


Figure 3

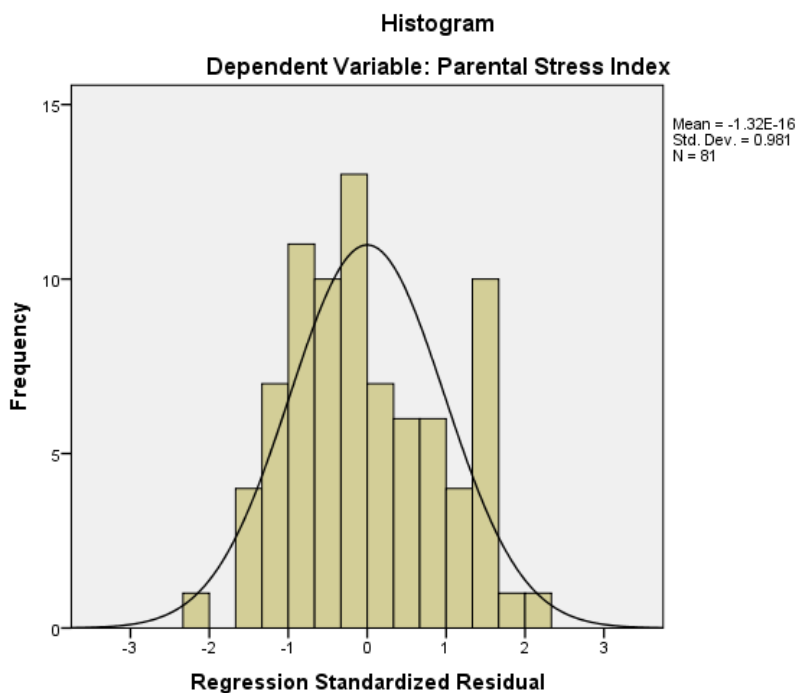
Boxplot of PSI Scores



The fourth assumption was the normality of residuals. Figure 4 presents the histogram of the residuals considering PSI scores as the dependent variable. The histogram shows that the residuals are normally distributed. Thus, the assumption of normality of residuals was met.

Figure 4

Histogram of Residuals



The fifth assumption was the independence of observations. To determine whether the data were independent of each other, I calculated the Durbin-Watson statistic. A Durbin-Watson statistic ranging from 1.5 to 2.5 indicates that the observations are independent of each other. For the regression analysis, the Durbin-Watson statistic was 2.169, which indicated that the assumption of independence of observations was met. The sixth assumption was that there is no multicollinearity in the predictor variables.

Table 3 presents the variance inflation factors of the predictor variables. Based on the results of the analyses, the VIFs ranged from 1.015 to 1.047, which is below 10, indicating that the assumption on multicollinearity was met.

Table 3

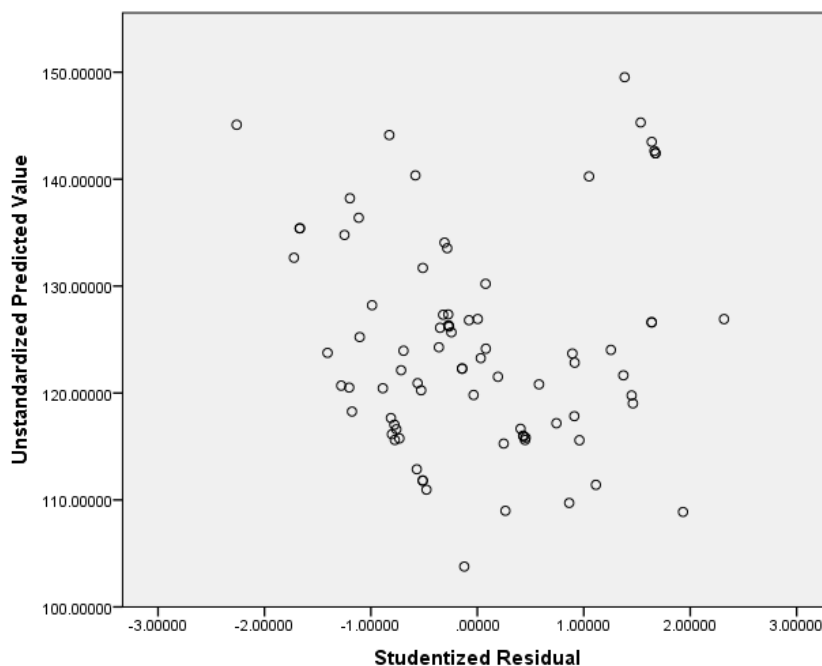
Variance Inflation Factor

	Collinearity Statistics	
	Tolerance	VIF
Family Support Scale	.969	1.032
Family Resource Scale	.955	1.047
Age	.985	1.015

The seventh assumption was the assumption of homoscedasticity. Figure 5 presents the scatterplot of studentized residual and unstandardized predicted values. The result showed that there was no pattern formed in the scatterplot. Therefore, the assumption of homoscedasticity was met. Moreover, the eighth assumption was the assumption of linearity. Figure 5 shows that there was a linear relationship between the studentized residual and the unstandardized predicted value. Thus, all the assumptions of the regression analysis were met.

Figure 5

Scatterplot of Studentized Residual and Unstandardized Predicted Value



Results for Research Question and Hypothesis

Research Question (RQ1): Is there an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age?

Alternative Hypothesis (H_1): There is an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age.

Null Hypothesis (H_0): There is no association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age.

To test the hypothesis for the study, I conducted a regression analysis considering FSS and FRS scores as predictor variables, PSI scores as the dependent variable, and age as a control variable. Based on the result of the ANOVA (see Table 4), the regression model was significant in predicting the PSI scores ($F[3,76] = 2.766, p = .048$). In other words, the regression model developed from the analysis significantly predicted the PSI of participants. Specifically, the regression result showed that the FSS score was a significant predictor of PSI ($B = .468, p = .022$). The results indicated that the FSS is significant in predicting the PSI. The results also revealed that a unit of change in the FSS score results in an increase of .468 in the PSI scores. The predictor variables explain 10.2% of the variance in the model. Therefore, there was sufficient evidence to reject the null hypothesis, which stated that there is no association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age.

Table 4

ANOVA Test of Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	4033.300	2	2016.650	4.154	0.02
Residual	35927.011	74	485.500		
Total	39960.312	76			
2 Regression	4078.102	3	1359.367	2.766	0.048
Residual	35882.209	73	491.537		
Total	39960.312	76			

a. Dependent Variable: Parental Stress Index

Table 5*Regression Model Results*

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
1 (Constant)	97.386	10.433		9.334	.000
Family Support Scale	.471	.198	.264	2.379	.020
Family Resource Scale	.121	.092	.147	1.322	.190
2 (Constant)	90.940	23.794		3.822	.000
Family Support Scale	.468	.199	.263	2.346	.022
Family Resource Scale	.124	.093	.151	1.339	.185
Age	.104	.344	.034	.302	.764

a. Dependent Variable: Parental Stress Index; R-squared = .102

Summary

The purpose of the study was to examine the predictive relationships between custodial grandparents' utilization of family resources (formal such as medical arrangements and financial) and family support (informal) on parental stress. I conducted a regression analysis to test the hypothesis of the study. I also tested assumptions of regression analysis prior to conducting the analysis. All assumptions were met, except for the assumption on outliers. I removed the outliers from the dataset. Based on the results of the regression analysis, FSS scores were a significant predictor of PSI scores. This means that the level of family support of participants significantly predicts their level of parental stress. Therefore, there was sufficient evidence to reject the null hypothesis

which stated that there is no association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age. Chapter 5 includes a presentation and discussion of findings as well as conclusions and recommendations of the study.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

Although there has been an increase in the literature on custodial grandparents, few studies have focused on the custodial grandparents in the Appalachia area. Appalachia is unique from other areas of the United States due to its high number of custodial grandparents and high rate of poverty (ARC, 2021b; United States Census Bureau, n.d.). Additionally, most studies pertaining to custodial grandparents' use of social support and other resources have utilized qualitative methods (Fokakis et al., 2020; Tang & Farmer, 2020; Xu et al., 2020). Although qualitative research is useful for understanding the experiences of custodial grandparents, findings of qualitative research are limited in generalizability. Therefore, I conducted a quantitative study. The purpose of this nonexperimental correlational study was to examine the predictive relationships between custodial grandparents' use of family resources (formal such as medical arrangements and financial) and family support (informal) on parental stress.

A total of 81 custodial grandparents living in Appalachia responded to an online survey. The results revealed that family support was significantly associated with parental stress when controlling for adequacy of family resources and grandparents' age. Adequacy of family resources was not associated with parental stress when controlling for family support and grandparents' age. In the following sections, the findings of the current study are discussed within the context of the current literature. Recommendations for future research and implications for practice are also provided.

Interpretation of the Findings

I addressed a significant gap in the current literature by examining the experiences of custodial grandparents in Appalachia. Custodial grandparents in Appalachia may have unique experiences compared to custodial grandparents in other parts of the country, as there is a high rate of both poverty and custodial grandparents in the area (ARC, 2021a; United States Census Bureau, n.d.).

Contrary to previous research (e.g., Fruhauf et al., 2015; Pandey et al., 2019) and Selye's (1952) stress theory, I found that greater family support was associated with greater parental stress when controlling for adequacy of family resources and grandparent's age. Adequacy of family resources was not associated with parental stress when controlling for family support and grandparents' age. The findings of the current study indicate that the association between custodial grandparents' parental stress and their use of formal and informal supports may be more complicated than previously anticipated.

Research Question

The research question was: Is there an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age? I hypothesized that there would be an association between perceptions of family support, adequacy of family resources, and parental stress levels in grandparent caregivers after controlling for grandparents' age. The findings indicated that family support was significantly associated with parental stress when controlling for adequacy of family resources and grandparents' age. When

controlling for use of resources and grandparent's age, the more support a custodial grandparent receives, the more stress they report. Adequacy of family resources was not associated with parental stress when controlling for family support and grandparents' age. Though the current study's findings are contrary to previous research (e.g., Generations United, 2017; Hansen et al., 2020; Hayslip et al., 2017) and Selye's (1952) stress theory, it is possible that additional research may explain, at least in part, these findings. The first possible explanation is that grandparents who need more support are receiving more support from their families who are experiencing less stress.

Consistent with Selye's (1952) theory, individuals who are experiencing more stress may use more coping mechanisms to manage their stress (Szabo et al., 2017). It is possible that grandparents who are experiencing higher levels of stress are deliberately reaching out to their families to seek greater support compared to grandparents who are experiencing less stress. In other words, grandparents who feel more stressed are seeking more help from their families as a coping mechanism for their own stress. This pattern has been identified in other relationships, particularly in romantic relationships. When individuals feel more stress, they are more likely to reach out to their support system to seek support in coping with their stress (Collins & Feeney, 2000).

Alternatively, custodial grandparents who receive more support from their families may be more involved within their families in general. Consistent with Selye's (1952) theory, this greater involvement may result in the experience of greater stress overall. In addition to being the primary caregiver of at least one grandchild, supporting their own children and other grandchildren may cause additional caregiving stress. In

other words, this combined caregiver role increases the stress among custodial grandparents (McKay & Nadorff, 2021; Sadruddin et al., 2019). Previous research has indicated that the more roles a caregiver takes on, the more caregiving stress they feel (Chan et al., 2019). Future research may consider examining how caregiving toward other family members in addition to their custodial grandchild influences custodial grandparents' stress (Kelley et al., 2021).

Despite the fact that organizations, clinicians, and researchers (Generations United, 2017; Hayslip et al., 2017) have noted that formal supports are necessary for reducing stress among custodial grandparents, the current study did not find that the use of family resources was associated with parental stress when controlling for family support and grandparents' age. This may be due to the fact that the grandparents in the current study were recruited from two programs with the goal of providing support to custodial grandparents. As all of the participants in the current study were actively seeking or receiving formal support specific to grandparents who have custody of their grandchildren, other variables (e.g., family support) may better explain why some custodial grandparents experience more stress.

Previous research has also noted that custodial grandparents struggle to identify formal resources because they have fewer skills with technology (Brunissen et al., 2020). In addition to poorer skills with technology that are common among custodial grandparents, custodial grandparents in Appalachia are largely low-income and may have limited access to the internet (ARC, 2021a). In the current study, only seven participants responded using an online survey; 74 participants responded using mail-in surveys. It is

possible that grandparents in this study either lack skills with technology or access to the internet. Appalachia is also a rural area, making resources harder to access. Both factors may add additional barriers to finding and accessing formal resources for some custodial grandparents in Appalachia. There was a significant range of custodial grandparents' income in the current study. It is possible that this additional barrier means that there were some custodial grandparents in the current study who struggle to find and access formal resources, while others may be able to access them more easily. Future researchers may consider examining how the association between parental stress and access of family resources among custodial grandparents in Appalachia varies depending on the number of barriers they face to accessing formal resources.

Limitations of the Study

The findings of the current study should be considered within the context of a few limitations. First, the findings of the current study may not be generalizable to custodial grandparents outside of Appalachia. Custodial grandparents have several characteristics (e.g., greater rates of poverty) that set them apart from custodial grandparents in other parts of the United States (ARC, 2021a; United States Census Bureau, n.d.). Future researchers may consider understanding similarities and differences in custodial grandparents' experiences depending on the communities in which they live.

Second, the current study was based on study participants' self-report of the key variables. Although I used three well-validated measures that are commonly used in the literature, there may have been some response bias. Participants may have felt some pressure to report positively regarding their access to formal support because of their

participation in the programs from which they were recruited. However, there was variation in all three measures, including use of family resources. As such, it appears that any response bias had minimal impact on the findings.

Finally, participants in the current study were all recruited from two programs specifically for custodial grandparents. This may have limited the custodial grandparents in the study to those who have minimal to low income, have younger children in the home, or already seek assistance for resources. Thus, the findings of the current study may not be generalizable to all custodial grandparents. Future researchers may consider expanding on the population of custodial grandparents in Appalachia to include custodial grandparents not actively seeking formal supports and grandparents who have custody of their grandchildren.

Recommendations for Future Research

Despite these limitations, the current study may provide some direction for future research. First, the current study was cross-sectional. Few studies have examined the association between parental stress and informal and formal supports among custodial grandparents longitudinally. Future researchers may consider following custodial grandparents across time to understand the association of custodial grandparents' use of informal and formal supports and their parental stress longitudinally.

Second, I found that as family support increases, so does parental stress. Based on the results, there are two possible explanations for this finding; however, future researchers may consider examining this trend in greater depth to better understand the complexities of family support. Some possible variables to include in future studies may

involve examining levels of family conflict, previous support-seeking behaviors, or communication skills. Understanding the complexities of family support may be important for providing appropriate recommendations for custodial grandparents.

Third, future researchers may consider recruiting participants using alternative methods. By recruiting custodial grandparents from programs offering formal support to that population, I obtained a targeted sample; however, this may have limited my ability to establish an understanding of the association between use of formal supports and parental stress among custodial grandparents in Appalachia. Future researchers may consider recruiting custodial grandparents from more general community programs, such as schools, libraries, or local clubs and organizations. Future researchers may obtain a better understanding of the association between formal support seeking and parental stress among custodial grandparents in Appalachia.

Implications for Social Work and Positive Social Change

The findings of the current study have some implications for social work practice and social change. Organizations, clinicians, and researchers (e.g., Generations United, 2017; Hansen et al., 2020; Hayslip et al., 2017) have argued that formal and informal supports are key to reducing stress among custodial grandparents. Many of these organizations and studies make broad recommendations to increase the amount of informal support that custodial grandparents receive (e.g., Fruhauf et al. 2015; Generations United, 2017; Pandey et al., 2019); however, simply encouraging custodial grandparents to seek more support may not be adequate for all grandparents. For example, the current study found that greater family support was associated with greater

stress. Clinicians and program leaders may consider more individualized recommendations for custodial grandparents experiencing stress while considering their existing relationships with family. For example, a screening tool asking custodial grandparents about their family relationships may be used to understand the custodial grandparents' relationships with their family before recommending they seek family support. If the custodial grandparent has a positive relationship with their family, seeking family support may be an appropriate recommendation. If custodial grandparents have a contentious relationship with their families, seeking family support may not be an appropriate recommendation.

With respect to positive social change, organizations and clinicians may also consider encouraging custodial grandparents to seek informal support in other relationships. For example, organizations may consider setting up support groups for custodial grandparents to seek support from each other. Support groups have been shown to be effective stress reduction methods for several other populations, including cancer patients McKay and Nadorff (2021) and caregivers of an individual with a disability (Hayslip et al., 2019). It is possible that support groups are an effective stress reduction technique for custodial grandparents as well.

Conclusion

The purpose of this quantitative nonexperimental correlational study was to examine the predictive relationships between custodial grandparents' use of family resources (formal such as medical arrangements and financial) and family support (informal) on parental stress. A total of 81 custodial grandparents living in Appalachia

responded to an online survey hosted through SurveyMonkey. They reported on their level of stress, family support, and adequacy of family resources. In this study, I found that family support was significantly associated with parental stress when controlling for adequacy of family resources and grandparents' age. Adequacy of family resources was not associated with parental stress when controlling for family support and grandparents' age. The findings of the current study suggest that the association between the use of formal and informal supports among custodial grandparents is complex and may depend on understanding multiple aspects of the family context.

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Appendix: Demographic Questionnaire

What is your current age? _____

What is your Race?

- _____ American Indian/Alaska Native (non-hispanic)
- _____ Asian(non-hispanic)
- _____ Black (non-hispanic)
- _____ Hispanic/Latino
- _____ Multiracial (non-hispanic)
- _____ Native Hawaiian and Other Pacific Islander (non-hispanic)
- _____ White (non-hispanic)

What is your Gender?

- _____ (Male)
- _____ (Female)
- _____ (Other)

What is your marital status?

- _____ (Never Married)
- _____ (Married)
- _____ (Separated)
- _____ (Divorce)
- _____ (Widowed)

What is your annual household income?

- _____ (\$0 – 14,999)
- _____ (\$15,000 – 20,000)
- _____ (\$20,000 – 25,000)
- _____ (\$25,000 – 30,000)
- _____ (\$30,000 – 35,000)
- _____ (\$35,000 – 45,000)
- _____ (\$45,000 – 55,000)
- _____ (\$55,000 – 85,000)
- _____ (\$90,000 plus)