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Examining Optimism and Caregiver Strain in Parents with Youth and Young Adults Diagnosed with Anxiety and Unipolar Mood Disorders

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EXAMINING OPTIMISM AND CAREGIVER STRAIN IN PARENTS WITH YOUTH AND YOUNG ADULTS DIAGNOSED WITH ANXIETY AND UNIPOLAR MOOD DISORDERS

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ABSTRACT

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An anonymous online survey investigated optimism and caregiver strain in parents of youth and young adults diagnosed with anxiety and unipolar depression. Caregiver strain is a well-researched phenomenon where the experience of parenting youth with serious psychological disorders has a potentially negative impact on parents and caregivers. Optimism is a trait that confers resiliency and improved coping to the individual. The relationship between caregiver strain and optimism is not well understood. This inquiry utilized the Caregiver Strain Questionnaire (CGSQ) to measure caregiver strain and the Life Orientation Test, Revised (LOT-R) to measure optimism. Participants endorsed significantly higher scores on the CGSQ subscale Subjective Externalized Strain (SES) and Subjective Internalized Strain (SIS), scales that collect data on the internal and external psychological experience of parents. Parents of youth with more than one psychological diagnosis endorsed higher SIS scores and reduced LOT-R scores. LOT-R scores were negatively correlated across all three CGSQ subscales; parents who endorsed higher caregiver strain also endorsed lower optimism. This dissertation is available open access at AURA, http://aura.antioch.edu/ and Ohio Link ETD Center, https://etd.ohiolink.edu.

Keywords: optimism, caregiver strain, caregiver burden, parenting, survey research

Dedication

This dissertation is dedicated to all the parents and caregivers of youth diagnosed with anxiety and unipolar depression. I have witnessed your commitment, successes, and struggles. You are amazing.

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First, I want to acknowledge my family, who were patient and supportive throughout this process. Lilly and Austin—you are the world to me and I want to make you proud. And you will have to call me Dr. Mom from this point forward. My mother who cheered me on through the final hurdles of internship and dissertation. I appreciated it more than you know.

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CHAPTER I: INTRODUCTION

This research study was intended to better understand the relationship between optimism and caregiver strain as it applies to parenting children diagnosed with anxiety and/or unipolar depression. My experiences supporting these families has fostered an aspiration to better understand what parents undergo, to better understand why some families struggle more than others, and to identify possible strategies to help them. There are a multitude of psychological interventions for youth diagnosed with anxiety and depression, such as Cognitive Behavioral Therapy and Interpersonal Psychotherapy (Seligman & Ollendick, 2011; Weersing et al., 2017). There are also numerous psychoeducation programs to help parents better understand their children's psychological disorders (Khanna, et al., 2017) or provide generic core parenting skills (Sanders et al., 2002). However, in my experience, these programs do not address the fundamental parenting burden experienced by these families, nor provide avenues of effective relief. These parents represent an underserved population where treatment for their child may indirectly provide some amelioration of parental anguish, though it is not a primary objective of treatment. My goal in this research is to better understand the experience of parents in these specific situations to begin to bridge the gap between what is offered to parents and what is needed. Exploring the interaction of optimism with caregiver burden represents one potential avenue to build solutions.

Significance

Childrearing youth with mental health disorders can increase the level of strain and burden experienced by parents (Accurso et al., 2015). In one large community study, between 10 –16% of parents of children diagnosed with a psychological disorder reported elevated strain, with the most common perceived burdens concerning personal well-being, general stigma, and

restrictions on personal activities (Angold et al., 1998). Thus, parents of children diagnosed with psychological disorders represent a substantial subset of caregivers who may experience higher levels of strain and burden.

Prevalence of Psychological Disorders in Children

Rates of diagnosable psychological disorders range from 10– in children and younger adolescents, which increases to 25 % in late adolescence and young adulthood (Ryan et al., 2015). Anxiety and unipolar depressive disorders are commonly diagnosed psychological disorders that have the highest levels of comorbidity among diagnostic categories (Copeland et al., 2013; Kessler et al., 2005). In children, anxiety disorders are the most frequently reported mental health issue, followed by behavior, mood, and substance abuse disorders (Merikangas & He, 2014). In a large population study, as many as one in five emerging adults meet criteria for an anxiety disorder (Copeland et al., 2014).

Research shows that the prevalence of depression among youth aged 12 to 20 has increased over the last 20 years (Mojtabai et al., 2016). The prevalence of depression in adolescents increased from 8.7 % in 2005 to 11.3% in 2014 and, in young adults, increased from 8.8% in 2005 to 9.6% in 2014 (Mojtabai et al., 2016). Youth and young adults diagnosed with anxiety and/or unipolar mood disorders represent a sizable minority within the psychiatric community.

Comorbidity of psychiatric disorders is generally associated with greater severity and chronicity of the disorders (Kessler et al., 2015). Additionally, these patients tend to respond less favorably to treatment and are at increased risk for suicide (Rivas-Vazquez et al., 2004). Given the prevalence of anxiety and depression disorders, as well as the risks associated with these

diagnoses, caring for these youth can present parents with significant challenges that contribute to caregiver burden.

Parents' Support Increases Treatment Efficacy

Being able to function effectively in the caregiver role is important to the efficacy of treatment provided to youth and emerging adults. It is well documented that parental involvement impacts the effectiveness of psychological treatment of mood and anxiety disorders for adolescents and young adults (Dowell & Ogles, 2010; Podell & Kendall, 2011; Wei & Kendall, 2014). An essential role of parents is to coordinate medical care including necessary psychological treatments. Medical insurance, transportation, and the associated costs of therapy and other services, such as copays for therapy and medications, are often dependent on family resources for adolescents and young adults (Ryan et al., 2015). Additional resources, such as the emotional and social support provided by adult family members, also impact the effectiveness of psychological services (Ryan et al., 2015). For example, research regarding Expressed Emotion, a phenomenon where parents are highly critical, hostile, and overly emotionally involved with family members with psychiatric disorders, is associated with adverse outcomes for those stricken (Peris & Miklowitz, 2015). Accordingly, understanding the experience of parents caring for youth with psychological disorders, and addressing their burden as caregivers, is important in effectively supporting both the afflicted youth and their family networks.

Optimism as a Protective Factor

Optimism is often associated with increased resiliency to distressing life challenges (Carver et al., 2010). Optimism has been associated with the reduction of parent stress and increased resiliency for parents of youth with other special needs, such as with parents of children with intellectual disabilities (Peer & Hillman, 2014). It has also been found that

optimism is generally associated with problem-focused coping styles, increased resiliency, and positive parenting practices (Peer & Hillman, 2014; Taylor et al., 2010). Optimism could be an important factor in mitigating caregiver strain with parents of youth with anxiety and/or unipolar depression disorders.

Purpose

There were two main purposes of this study. First, to better understand the types of caregiver strain parents and caregivers of youth diagnosed with anxiety and/or unipolar depression experience. Second, to explore the role of optimism as it relates to caregiver burden. Optimism is associated with increased parental positive feelings and is considered a protective factor of parents of children with special needs and (Kurtz & McIntyre, 2017). The potential moderating effect of optimism has not been studied in parents of youth diagnosed with anxiety and/or depression, an omission this research study hopes to address.

Key Terms

Parent and Caregivers

Parents are often the primary caregivers for children and emerging young adults, though other significant caregivers may also be involved. Caregivers can include biological parents, stepparents, adoptive parents, foster parents, parents' significant others, extended adult family members, and adult siblings. For simplicity, the term parents or caregivers will be used henceforth interchangeably to encompass the large variety of caregivers for youth.

Caregiver Burden

Caregiver burden has been narrowly defined as the psychological distress associated with caregiver duties in older caregivers in some studies (Schulz & Sherwood, 2008). In less recent research, the general definition of caregiver burden referred to an objective component when it

corresponded to physical and/or mental effects (i.e., confusion) related to caretaking and a subjective component when related to the negative feelings (i.e., shame, anger) that arose from caregiving (Deeken et al., 2003). Researchers have viewed psychological distress as an outcome of caregiver burden (Brannan & Heflinger, 2001). Caregiver strain and burden are often used interchangeably in research studies and will be transposable throughout this manuscript.

Clarifying Caregiver Strain as a Construct

One area in which caregiver burden and caregiver strain are defined differently is when focusing on specific aspects of the caregiver experience. Contrary to caregiver burden, caregiver strain as a construct involves multiple aspects: objective, subjective internal, and subjective external (Whitlock et al., 2018). Objective caregiver strain (OS) includes resource demands on the family, such as financial costs and transportation (Whitlock et al., 2018). Subjective internal strain (SIS) focuses more on negative internalized emotions of the parent, such as self-blame, regret, or guilt (Whitlock et al., 2018). Subjective external strain (SES) describes externalized negative emotions of the parent, such as anger (Whitlock et al., 2018).

The complexity of caregiver strain is what separates it from a similar construct, parental stress. Parental stress is defined as a specific type of stress that occurs when the parent perceives that their physical and psychological resources have been depleted beyond their ability to cope or manage, and combines physical and psychological resources into one measurable facet (Deater-Deckard, 2004). Parental stress involves both the child's characteristics and parental functioning, which influence each other bidirectionally (Theule et al., 2010). Due to the partial construct overlap, some relevant studies on parental stress in caring for youth with challenging conditions have been included in the Literature Review when studies on caregiver strain in those areas were sparse.

Optimistic Explanatory Style

Optimism is represented by two main concepts in the research literature: optimistic explanatory style and dispositional optimism (Forgeard & Seligman, 2012). Learned helplessness, which generated the concept of the optimistic explanatory style (Foregard & Seligman, 2012), was first identified in diverse experiments with animal and human subjects where the subjects were exposed to unavoidable, uncontrollable stressors (Hiroto & Seligman, 1975). Some of the subjects re-enacted their previous failure to escape uncontrollable stressors in future endeavors regardless of their solvability and appeared "helpless" (Hiroto & Seligman, 1975). Conversely, some of the subjects persisted in their future undertakings regardless of the past exposure to uncontrollable stressors (Forgeard & Seligman, 2012). From this research, the concept of explanatory or attribution styles was developed to describe this phenomenon.

The optimistic explanatory style was developed to describe the subjects who were potent and persevered in future scenarios regardless of their past exposure to the uncontrollable stressors (Forgeard & Seligman, 2012). An individual with an optimistic explanatory style views negative events as unstable and context specific. More optimistic individuals acknowledge negative events, though they tend to view them pragmatically and they are more confident in their ability to solve stressful predicaments. A pessimistic explanatory style was developed to describe subjects previously described as displaying helplessness. These subjects viewed negative events as stable, constant, and having global consequences. They also tended to blame themselves for negative events and not credit themselves with their accomplishments or good fortune. Researchers believe an optimistic explanatory style may explain why some individuals appear more resilient in the face of negative events than others (Forgeard & Seligman, 2012).

Dispositional Optimism

Dispositional optimism is a cognitive construct defined as having positive expectancies about future outcomes (Carver & Scheier, 2014). It is a construct related to, yet different from, hope, self-efficacy, and attributional style. Dispositional optimism differs from these other constructs because it focuses on positive expectations on future outcomes that are general, consistent, and not focused on the means. Researchers of dispositional optimism are interested in general expectancies for favorable outcomes, rather than the interpretation of specific events as being positive or negative (Carver & Scheier, 2014).

Research on the potential construct overlap of an optimistic explanatory style and dispositional optimism has evaluated the possible relationship, looking for statistical significance connecting expectancies, such as dispositional optimism, and explanatory styles (Carver et al., 2010). In a study by Carver et al. (2010) attributions for negative events were only modestly associated with expectancies. As a result, it was determined that the two constructs were not interchangeable despite the conceptual similarities (Carver et al., 2010). For ease of use, this dissertation proposal will use the term optimism to refer to dispositional optimism unless otherwise stated.

CHAPTER II: LITERATURE REVIEW

Origin of Optimism

Optimism has both biological and environmental roots. Researchers have discovered a partial genetic influence in developing optimism (Mosing et al., 2009) which may be attributable to lower activity of a threat-related gene expression program, referred to as the conserved transcriptional response to adversity, which is inversely associated with optimism (Uchida et al., 2018). Environmental influences, such as parents, teachers, and media, still play a key role in the development of optimism (Forgeard & Seligman, 2012) and research shows that the presence of resources, such as parental warmth and financial security in childhood, predict adult optimism (Heinonen et al., 2006)

The definitions of optimism and pessimism are based in the expectancy-value models of motivation (Carver et al., 2014). Expectancy-value theories assume that behavior is goal-directed, either through desired states or actions and both optimism and pessimism are expectancies that focus on the future. There is debate in the literature regarding whether optimism is a unipolar or bipolar construct. Per Carver et al. (2014), a unipolar construct of optimism posits that optimism and pessimism are essentially aspects of one construct, while a bipolar construct posits that optimism and pessimism are discrete concepts on opposing poles. The essential question seems to be whether the separation of responses to positively worded items from responses to negatively worded items reflect method variance or substantive variance. The researchers reviewed multiple research studies that focused on resolving this specific issue with confounding results. Whether a study endorsed or rejected an optimistic or pessimistic outlook in their research framework directly impacted their findings. The dilemma remains unresolved and researchers have been encouraged to continue to assess the item subsets

are well as overall scale scores to determine whether a unipolar or bipolar construct is most appropriate for their study (Carver et al., 2014).

Optimism is also considered a personality trait (Carver & Scheier, 2014). Using traits as predictor variables in research is controversial, as causal relationships cannot be fully determined by correlational data (Carver & Scheier, 2014). Test-retest correlations for personality traits in personality research literature have ranged from .58 to .79 over time periods of several weeks to three years (Lucas et al., 1996). In a study comprised of middle-aged women, Matthews et al. (2004) reported a test-retest correlation of .71 for the trait of optimism over a 10.4 year period. Further, other studies have accounted for extraneous variables to reliably connect certain personality traits with specific behavior and outcomes (Roberts et al., 2007). The use of narrowly defined traits, such as dispositional optimism, is considered more effective than broader measures to maximize accuracy in prediction of behavior outcomes (Ozer & Benet-Martınez, 2006). For example, Daukantaite and Bergman (2005) found that optimism in adolescence was the best predictor of life satisfaction in middle age over a 30-year longitudinal study. There is growing evidence that dispositional optimism is one of the positive traits subsumed in the extraversion dimension of the Big 5 personality traits associated with improved coping and enhanced psychological resources (Ozer & Benet-Martınez, 2006).

Optimism and Coping

Optimism is associated with numerous positive consequences (Forgeard & Seligman, 2012). Optimistic people appear to approach problems while pessimistic people appear to be avoidant (Carver et al., 2010). For example, studies with women being screened for cancer found that patients with pessimistic expectancies engaged in more avoidant coping, and ultimately reported higher distress if there was a positive cancer diagnosis (Carver et al., 2010). Optimists

tend to be more flexible and adjust their coping to the nature of the stressor (Nes, 2016). Optimistic views have been found to be beneficial when they do not distort reality to the point it is harmful, such as when cigarette smokers deny cancer risks (Schneider, 2001). Risk for psychopathology positively correlates with individual differences in optimism (Carver et al., 2010). Optimism is also associated with long term benefits and symptom reduction for adults in psychotherapy (Heinonen et al., 2017)

There is an important distinction between coping styles that either favor engagement or favor avoidance to cope with potentially stressful events (Solberg et al., 2006). Engagement styles are positively associated with optimism and problem solving. Optimism was strongly associated with the problem-focused coping and emotion-focused coping, which involved cognitive restructuring or acceptance. Optimism predicted more problem-focused coping with controllable stressors. It also predicted more emotion-focused coping with uncontrollable stressors. Per Solberg et al. (2006), optimism predicted active attempts to both change and accommodate to stressful circumstances, and disengagement coping approaches that involved behavioral disengagement or emotional avoidance were negatively associated with optimism.

Optimism and Parenting

Optimism has been linked to positive parenting practices and overall better physical health (Scheier & Carver, 1987; Taylor et al., 2010). Parents' positive expectations, or optimism, that medication would lead to better outcomes was a predictor of medication adherence for a psychiatric intervention that treated anxiety in children (Zehgeer et al., 2018). In addition to optimism being associated with increased parental positive feelings, it is a protective coping factor for parents of children with special needs (Kurtz & McIntyre, 2017). Mothers who endorsed higher optimism reported less stress and reduced negative psychological effects

associated with raising their children who had been diagnosed with significant behavior disorders (Blacher & Baker, 2019). Optimism is associated with persistence and coping strategies that focus on proactive problem solving, a strength in the parent role (Nes, 2016).

Optimism and Caregiving for Older Adults

Research demonstrates positive gains associated with optimism among caregivers of adults. Optimism was associated with less depression and reduced caregiver burden among caregivers of cancer patients and caregiver spouses of Alzheimer's patients (Carver et al., 2010). Caregivers of elderly relatives who reported high caregiver satisfaction described the deliberate focus on the positive aspects of caregiving while avoiding venting on negative aspects (López et al., 2005). Long-term benefits associated with optimism include positive psychological and overall wellbeing (Nes, 2016).

Optimism With Parents and Caregivers Across Cultures

Optimism is a culturally-bound concept that is based on a Eurocentric framework (Constantine & Sue, 2006). It is important when examining optimism to consider different value orientations and within group differences (Constantine & Sue, 2006). Factors related to positive psychology in non-White populations include collectivism, racial and ethnic pride, spirituality and religion, interconnectedness, and family and community (Constantine & Sue, 2006). While it is necessary to consider the specific value orientation of the groups being studied, optimism may traverse cultural differences. In a recent study of 426 individuals comparing individualistic and collectivistic orientations and optimism, no significant differences were found between groups (Mishra, 2015).

Single mother heads of households are at greater risk for poor psychological functioning (Brown & Moran, 1997). African American single mothers represent 63% of the overall single

mother heads of household in the United States, placing them at higher risk for poor psychological functioning (U.S. Census Bureau, 2006). Among diverse ethnicities, higher optimism is negatively correlated with depression and stress (Grote et al., 2007). Maternal optimism surveyed in African American women was positively associated with effective child management and negatively associated with internalizing psychological symptoms and economic pressure (Taylor et al., 2010). Higher levels of optimism decreased internalizing symptoms in African American women when economic pressure was high by over 1.5 standard deviations in the sample studied (Taylor et al., 2010).

Utilizing cross-sectional data from the Patterns of Youth Mental Health Care in Public Services Systems, researchers drew a stratified, random sample of multi-ethnic participants to investigate caregiver strain between four ethnic groups: Non-Hispanic Whites, African Americans, Hispanics, and Asian Pacific Islanders (API; McCabe et al., 2003). The participants were parents and/or caregivers of youth referred to mental health or substance abuse treatments. Controlling for other variables, researchers found that African American and API parents reported lower levels of social support. However, African American and API parents reported lower caregiver burden than Non-Hispanic Whites and Hispanic parents. This was not what researchers had predicted and they were interested in pursuing the mechanism underlying the reported lower levels of caregiver burden in those parent groups (McCabe et al., 2003).

Caregiver Strain With Children With General Psychiatric Disorders

Non-suicidal self-injury (NSSI) behavior is associated with disordered eating, anxiety, and depression (Whitlock et al., 2018). Parents of individuals with NSSI behavior have reported guilt, shame, distress, and loneliness; uncertainty in the parental role; concern their parenting approach will somehow trigger NSSI behavior; and lack of social support and resources

(Whitlock et al., 2018). In a study of 196 parents of children with NSSI behavior and 57 control group parents, parents completed the Caregiver Strain Questionnaire (CGSQ) to assess the impact of NSSI behavior on parents, and the Life Orientation Test to assess for dispositional optimism. On the CGSQ, the parents reported significant scores in all three scales; Subjective Internal Strain (SIS), Objective Strain (OS), and Subjective External Strain (SES). The most significant score was on the SIS subscale, which reflects feelings of self-blame, regret, or guilt. The OS subscale, which measures of demands on external resources such as time and fiscal resources, was of a lesser magnitude. The least significant findings were observed in the SES subscale, which captures negative emotions about one's child. Parents of youth with NSSI behavior also reported significantly less optimism on the Life Orientation Test than the control group parents (Whitlock et al., 2018).

In another study of caregivers and youth with general psychiatric disorders, 444 caregivers of youth aged under 18 (who presented to a pediatric emergency room for mental health related issues) were asked to complete the CGSQ (Molteni et al., 2017). The SIS subscale was significantly higher than the SES subscale ($p < 0.001$), meaning that caregivers reported experiencing more feelings of shame and guilt. Disruptive behavior, substance use disorders, presenting aggression, and police involvement were associated with higher overall CGSQ scores and higher SES scale scores, indicating negative feelings about one's child, such as anger. Lower child functioning was associated with higher total SIS subscale scores and overall CGSQ scores (Molteni et al., 2017).

Australian parents participated in a study where the Burden Assessment Scale (an early version of the CGSQ) was administered to 203 participants (Bhullar et al., 2017). The sample was comprised of parents of children between ages 12 to 25 who had been diagnosed with a

psychological disorder. Parents were asked to indicate the extent of caregiving experiences during the past six months. Those who endorsed higher caregiver burden also endorsed greater restriction of their daily routine, personal control, and social activities. Greater restriction was positively correlated with higher levels of depressive symptoms. Caregiver burden was not found to be influenced by age, income, or gender (Bhullar et al., 2017).

Caregiver Strain With Developmental Disabilities

Using the 2005–2006 National Survey of Children with Special Health Care Needs, caregivers of 12,225 children diagnosed with developmental disabilities were studied to determine predictors of caregiver burden (McManus et al., 2011). Caregiver burden was inversely related with ease of access and navigation of the healthcare system. Unmet health care needs were positively associated with caregiver burden. Caregivers who identified as minorities, endorsed poverty, and had uninsured children reported significantly higher caregiver burden. (McManus, et al., 2011).

Research on caregivers with children who have cerebral palsy demonstrated a significant relationship between family cohesion, depression, and caregiver strain (Barnes, 2014). In one study, 190 parents with a child diagnosed cerebral palsy were compared to a control group of 110 parents with typically developing children (Gugała et al., 2019). The control group parents reported significantly less anxiety and depression than the parents with children with cerebral palsy (Gugała et al., 2019). Factors associated with intensity of anxiety and depression included lack of social support, loneliness, low economic status, parent's gender, and the presence of an intellectual disability in the child (Gugała et al., 2019).

Fetal Alcohol Spectrum Disorder (FASD) is a developmental disorder that occurs due to prenatal alcohol exposure and involves physical, cognitive, behavioral, and learning disabilities

(Bobbitt et al., 2016). Youth with FASD often experience adverse outcomes such as mental health issues, delinquency, and legal troubles. Bobbitt et al. (2016) found that the severity of the child's disability, the level of disruption to the family, and difficulty of the caregiving tasks were positively associated with caregiver stress. Parents and caregivers of children with FASD report higher levels of parental stress compared to parents of children diagnosed with Autism (Bobbitt et al., 2016).

Caregiver Strain for Parents of Children with Autism Spectrum Disorder

In a study of 109 mothers of children with Autism Spectrum Disorder (ASD), higher caregiver strain was a risk factor for psychological distress (Wiener, 2012). While caregiver strain and optimism predicted 36 % of the variance in maternal psychological distress, optimism was not found to moderate the mothers' experience of psychological distress (Wiener, 2012).

Parents report higher levels of strain with youth of ASD than other types of chronic illness (Mao, 2012). Some contributory factors discussed included difficulties in communication, unpredictable behaviors and aggression, social isolation, limited self-care, and inability to find adequate substitute caregivers for respite. When compared to parents of typically-developing children or parents of children with intellectual disabilities, parents of children with ASD reported more psychological distress, such as depression, anxiety, and somatic complaints. Additionally, the caregiving difficulties for children with ASD and their families were not expected to diminish in adulthood (Mao, 2012).

Parenting Stress with Children with ADHD and Other Externalizing Behavior Disorders

There is abundant research on the parenting experiences of children with externalizing behavior disorders (de Haan et al., 2013). Externalizing disorders include Attention-Deficit Hyperactivity Disorder (ADHD), Oppositional Defiant Disorder (ODD), and Conduct Disorder

(CD). When compared to control groups, parents of children with ADHD experience statistically significantly more parenting stress (Deault, 2010; Theule et al., 2010). Externalizing behaviors in youth, such as aggression and oppositional defiant behaviors, are also higher predictors of parenting stress (Baldwin et al., 1995). In one study, parents of youth who demonstrated high levels of concurrent internalizing and externalizing behaviors endorsed higher caregiver strain across all three subscales of the CGSQ, especially in comparison to parents of youth where lower levels or only a singular category was endorsed (Vaughan et al., 2012). Research also indicates a positive correlation between the severity of ADHD symptoms and the level of parenting stress (McCleary, 2002; Morgan et al., 2002).

Caregiver strain was assessed as part of the Practice and Research: Advancing Collaboration study (Accurso et al., 2015). This was a study of 217 parents and collected data on treatment-as-usual for children with disruptive behavior problems in community-based outpatient clinics between 2004 to 2007. The bidirectional impact of child symptom severity and service access related to reported caregiver strain was of high interest. Child symptom severity and the use of mood stabilizing medications were the highest predictors of parent OS early in treatment, though this aspect of parent strain improved the most over time. Overall, all parent strain scores demonstrated modest improvement over the course of time, particularly in the parent OS aspect. Child symptom severity was also the highest predictor of caregiver SES and SIS strain. Caregiver endorsement of child symptom severity early in treatment was associated with higher child symptom severity later in treatment. Researchers concluded that addressing child symptom severity led to relief of OS for caregiver strain, but it was not sufficient to address parent SES and SIS (Accurso et al., 2015).

Kashdan et al. (2002) provided self-report questionnaires to 252 parents of children diagnosed with externalizing disorders including ADHD, ODD, and/or CD (Kashdan et al., 2002). Sense of agency among parents, defined as initiating and sustaining effort towards goals, was positively correlated with individual and familial positive coping (Kashdan et al., 2002).

The Caregiver Perspective on Pediatric ADHD survey was implemented in ten European countries (Fridman et al., 2017) and was comprised of a sample of 2,326 parents of children who had received ADHD pharmacotherapy. Regardless of ADHD pharmacotherapy use, parents reported increased worry, strain on family life, disruption of work, and avoidance of social activities. Comorbidity and severity of ADHD symptoms were associated with increased burden and work disruption (Fridman et al., 2017).

Caregiver Strain with Young Adults Diagnosed with Schizophrenia

Using interpretative phenomenological analysis, McCann et al. (2011) investigated the qualitative experience of 20 parents of young adults with first episode psychosis. Parents reported feeling conflicted about taking over tasks for their young adults they had previously relinquished. Further, parents were often the first responders for acute psychotic episodes. Parents reported serious financial stressors, such as deferring retirement or selling assets, to pay for care. They also reported SIS, such as guilt for passing on genetic maladies or their perception of poor past parenting. Parents additionally reported a strong sense of burden. Positively, the caregivers reported becoming closer with the young adult and emphasized the importance of maintaining hope (McCann et al., 2011).

Caregiver Strain with Chronic Medical Conditions

Caregivers of chronically medically ill children reported negative effects including isolation, depression, and financial disequilibrium (Brown et al., 2010). Based on an integrative

review of the available research, mothers of these children represented the vast majority of primary caregivers in their samples (Macedo et al., 2015). Single parenthood, inadequate finances, low education level, reduction in social activities, high number of children, and the presence of anxiety and depression in the caregivers was associated with caregiver strain (Macedo et al., 2015). The perception of the seriousness of the illness, sleep disruption, and inability to meet their children's needs were also associated with caregiver burden (Macedo et al., 2015).

Caregiver Strain with Eating Disorders

Anorexia nervosa is a disorder that manifests in adolescence with a difficult, protracted course that contributes to caregiver strain (Schwarte et al., 2017). Parents of children with anorexia report higher levels of anxiety and depression (Schwarte et al., 2017). Further, mothers and fathers can experience caregiver burden differently (Martin et al., 2013). In a large-scale study of eating disorder outpatient clinic patients in Spain, 111 mothers and 70 fathers completed an assessment battery to investigate predictors of caregiver burden and quality of life for these families (Martin et al., 2013). For mothers, marital status, severity of symptoms, and direct caring for their children were associated with lower quality of life (Martin et al., 2013). For fathers, parent strain resulted in anxiety and lower quality of life (Martin et al., 2013).

In a study of the experience between parents of adults diagnosed with eating disorders or schizophrenia, parents reported the highest frequency of problems around disappointment related to the chronic nature of both disorders, anxiety about the care recipient's future, and difficulties communicating with the adult child (Graap et al., 2008). Additionally, both parent groups reported the need for professional support and counseling related to their roles. Parents of adults diagnosed with bulimia nervosa (versus anorexia) in the eating disorder group reported generally

less distress compared to the other parents. In a comparison of groups, parents of adults with anorexia and parents of adults with schizophrenia reported near equivalent levels of distress and unmet needs (Graap et al., 2008).

Aims and Alternative Hypotheses

The focus of this research study was to assess parents' level of optimism, their level of caregiver strain, and the relationship between their reported levels of optimism and levels of caregiver strain. In assessing caregiver strain, demographic variables were investigated for possible correlations. For example, did single parent households with lower income experience higher parent strain than two-parent households with higher income? Other considerations included the impact of the age of the child or the complexity of the psychological presentation relative to assessing parent strain. The research questions and their corresponding hypotheses are as follows:

1. Are there statistically significant differences among demographic variables that impact parent strain?

   H_1: Parent demographic variables (age, gender, relationship status, geographic, ethnicity, income, education) will predict differences in caregiver strain scores across the three subscales of the CGSQ.

2. Do parents report a wide variety of strain scores across the three subscales as measured by the CSGQ?

   H_2: Parents will endorse statistically significant caregiver strain scores across the three subscales as measured by the CSGQ.

3. Does age of the youth/young adult predict types or severity of parent strain?

H_3: Age of the youth negatively predicts the type or severity of caregiver strain as measured by clinically significant scores on the CGSQ.

4. Does age of the youth/young adult predict level of caregiver optimism?

   H_4: Age of youth will predict level of parent optimism with older age positively correlated with higher parent optimism as measured by the LOT-R.

5. Does the number of diagnoses among care recipients predict severity of caregiver strain as reported by parents on the CGSQ?

   H_5: It is predicted that parents of youth with multiple diagnoses will report higher levels of strain on the CGSQ than parents of those with a single diagnosis.

6. Is there a correlation between optimism and the severity of caregiver strain across the three subscales of the CGSQ?

   H_6: Higher optimism caregiver scores as measured by the LOT-R measure will be associated with lower caregiver strain across all three subscales of the CGSQ.

7. Is there a relationship between severity of youth diagnostic presentation and caregiver optimism?

   H_7: It is predicted that parents of youth with multiple diagnoses will report lower optimism as indicated by lower LOT-R scores than parents of those with a single diagnosis.

CHAPTER III: METHOD

A survey-based methodology was selected to evaluate the role of optimism in caregiver strain among caregivers for youth or young adults with anxiety or unipolar depression. Participants were recruited utilizing a non-probability self-selection sampling method, including convenience and snowball sampling. The study information was distributed through e-mail contact with individuals and organizations involved with parenting and the provision of mental health services, such as Mill Creek Youth and Family Services. Study information was also distributed as public postings on community social networking sites, such as Seattle Parenting Group and the Mill Creek Community Page on Facebook. Participants were encouraged to pass along information about the study to others who might be eligible without needing to inform the researcher. Eligible participants included adults with access to the internet and in the role of parents or caregivers of youth and young adults diagnosed with anxiety and/or unipolar depression. The quantitative survey was completed online to reach the highest number of potential participants and to target parents of youth with psychological disorders, who may have otherwise been difficult to reach (Regmi et al., 2016). The survey was anonymous to avoid impression management influencing the participants responses.

The study utilized three assessments that are more thoroughly described below: a demographic survey, the Life Orientation Test Revised (LOT-R) and the CGSQ. The anonymous web-based survey was developed through SurveyMonkey (2019), specifically constructed to block collection of IP addresses or email lists for privacy protection. The demographic survey, the LOT-R, and the CGSQ were embedded in the SurveyMonkey survey as one seamless document.

Measures

Demographic Form

Data was collected for both the parent completing the survey and the youth they cared for. General categories included age, ethnicity/race, gender, education level, psychiatric diagnoses, relationship status, geographic region (i.e., urban, suburban, rural), and household income, though for the latter three only parent data were only collected. A copy of the demographic questions is listed in Appendix A.

Caregiver Strain Questionnaire

The CGSQ is a 21-item assessment that utilizes a five-point Likert-like scale and identifies three subscales: Objective Strain, Subjective Externalized Strain, and Subjective Internalized Strain (Brannan et al., 1997). Across all three dimensions, higher scores are indicative of greater perceived strain. The measure is freely available to be used as part of dissertations that are not sold or widely distributed to the general public (Copyright Clearance Center, n.d.).

The CGSQ is considered a reliable and valid instrument (Khanna et al., 2012). The CGSQ and its subscales have good internal consistency with alpha coefficients ranging from 0.73 to 0.91 (Khanna et al., 2012). The construct validity of the CGSQ has been demonstrated in multiple studies that have found that the CGSQ correlates with child symptoms, family wellbeing, and caregiver psychological distress (Brannan & Heflinger, 2006). Additionally, the instrument has demonstrated good reliability and validity in multiple studies with adolescents with mental health and substance abuse issues (Heflinger & Brannan, 2006). A confirmatory factor analysis was also completed where examination of the internal validity in each subscale supported high factor loading (Whitlock et al., 2018). The psychometric properties of the CGSQ

were also tested for parents of youth with autism (Khanna et al., 2012) and it demonstrated good convergent validity and internal consistency reliability. The CGSQ was also normed for African American and White parents with comparison of the internal consistency: African American (.93) and White (.94) parents, indicating good internal consistency for the scale (Kang et al., 2005). Using the Feldt method, no significant differences were found between Cronbach alpha coefficients for the two groups (Kang et al., 2005).

Life Orientation Test-Revised

The LOT-R is a brief measure of optimism/pessimism commonly used in research. It is an eight-item self-report scale with a five-point Likert-like scale with higher scores indicating a more optimistic orientation. Common factor analysis for this measure has been identified as a single high loaded factor with a Cronbach's alpha of .88. (Whitlock et al., 2018). This brief test has been normed, used internationally by diverse researchers, and has been central to multiple research studies on optimism (Scheier & Carver, 1985; Whitlock et al., 2018). Further, the LOT-R has been recommended by researchers for epidemiology and clinical studies (Hinz et al., 2017). The author of the measure (Charles Carver, PhD) made it freely available for research applications (Self-report measures available, n.d.).

CHAPTER IV: RESULTS

Summary Data

Sample Group

The sample group was comprised of adults minimally aged 18 years or older who were parents or caregivers of youth and/or young adults diagnosed with anxiety and/or unipolar mood disorders. Other criteria for participation included access to the internet. Data from 13 of the 96 participants who completed the anonymous online survey were excluded from the analyses because they did not meet the eligibility criteria. It is recommended that research studies that use correlational data analysis have a minimum sample size of 50 (VanVoorhis & Morgan, 2007). Based on an a priori power analysis, which estimated a minimum sample size of 60 with a medium effect size and a power of .80, the final sample size of 83 exceeded requirements for correlational analysis (Faul et al., 2009).

Psychometric Properties of the LOT-R and CGSQ

The assessments maintained high reliability with the current data set, with the Cronbach's alpha for the LOT-R computed at α =.832 and the CGSQ at α = .889. The Cronbach's alpha for the three scales of the CGSQ were computed as the following: Objective Scale α = .932, Subjective External Scale α =.807, and the Subjective Internal Scale α = .837.

Mean, Skewness, and Kurtosis

LOT-R. The mean of the LOT-R was 3.7450 with a standard error of .08964. The skewness was -.300 with a standard error of .264. Finally, the kurotosis was -.672 with a standard error of .523. The skewness score being below -.05 and the kurtosis score being below -1 support that the LOT-R results represent a normal data distribution (Field, 2013).

CGSQ. Each of the three subscales had their respective mean, skewness, and kurtosis computed individually as several of the research questions compared scores between the subscales. Given the importance of the statistical analysis of the subscales in accepting or rejecting the alternative hypotheses, it was important to establish the data distribution of each subscale data set.

Os Subscale. The mean for the OS subscale was 2.1993 with a standard error of 2.1993. The 5% trimmed mean was 2.1362. The skewness was 1.046 with a standard error of 2.64. The kurtosis was .691 with a standard error of .523. The skewness being over 1.0 denoted a positively skewed data set, which indicates a non-normal data distribution for this subscale (Field, 2013). The Shapiro-Wilk test of normalcy was .967 was significant ($p>.05$) for a non-normal distribution.

SES Scale. The mean for SES subscale was 2.0422 with a standard error of .09259. The 5% trimmed mean was 1.9784. The skewness was 1.164 with a standard error of .264. The kurtosis was .830 with a standard error of .523. This subscale also had a non-normal data, which was signified by the skewness exceeding 1.0 (Field, 2013). The Shapiro-Wilk test of normalcy was .967 was significant ($p>.05$) for a non-normal distribution.

SIS Subscale. The SIS subscale mean was 2.8614 with a standard error of .10052. The skewness was .519 with a standard error of .264. The kurtosis was -.361 with a standard error of .523. The skewness of .519 indicates a moderate skewness, however it is still within acceptable parameters as it is below 1.0 for a normal data distribution (Field, 2013).

Use of Inferential Statistics

The central limit theorem states that data will assume a normal distribution regardless of the shape when the sample size is large enough, which has been determined to be 30 or higher

(T. Lunney et al., 2002). This is important when analyzing the results of this survey, where the LOT-R and SIS subscale have a skewness supporting a normal data distribution and the OS and SES subscales have a positively skewed data set indicating a non-normal data set. A Shapiro-Wilk test of normalcy was computed for all four data sets (LOT-R .967, OS .914, SES .884, SIS .960), and all were significant ($p > .05$), which could indicate non-normal data sets (Field, 2013). However, the Shapiro-Wilk can be significant in large samples for small and unimportant effects or lack power in small samples to detect violations, rendering it unreliable (Field, 2013). Fortunately, the sample size of the survey at 83 is large enough that the central limit theorem supports treating the data results of the LOT-R and the three CGSQ subscales as data sets with normal distributions (Kwak & Kim, 2017). Further, several of the alternative hypotheses explore how specific categorical predictor variables (i.e., youth having one diagnosis versus more than one diagnosis) correlate with the survey results. Data distribution within specific categorical predictor variables is not expected to follow a normal bell curve as it would in aggregate samples (G. H. Lunney, 1970). For these reasons, the four data sets that include the LOT-R and the subscales of the CGSQ meet the assumption of normality despite their skewness or Shapiro Wilk scores and the use of inferential, parametric statistics is appropriate (Field, 2013). Nonetheless, it is reasonable to interpret the statistical analysis of the results with caution.

This study utilized two sample *t* tests to develop statistical support for accepting or rejecting alternative hypotheses that involved comparing a dependent variable across two independent variables. Scale of measurement, homogeneity of variance, and normal data distribution are important to having valid *t* test data (Field, 2013). First, the scale of measurement must be in the form of continuous or ordinal scales, such as with the Likert scales used in both the LOT-R and CGSQ survey data (Field, 2013). Homogeneity of variance was determined for

each *t* test utilizing Levene's Test for Equality of Variance, which is a test that determines whether differences between the variances of independent variables is beyond random chance (Field, 2013). When Levene's test is non-significant ($p > .05$), the variances are found to be approximately equal, establishing homogeneity of variance (Field, 2013). As previously discussed, the central limit theorem as applied to the sample in this study allows for the data to be treated as normal data distributions.

Several research questions involved comparing the relationship between two variables. To collect data that provided support to accept or reject alternative hypotheses in these situations, Pearson Correlation Coefficients were utilized. Pearson Correlation Coefficients are a standardized measure that assesses the strength of a relationship between two variables (Field, 2013).

One research question investigated if each respondent reported significant differences between their respective three subscales scores on the CGSQ, which required a Test of Within-Subjects Effects to determine. This test is utilized when comparing different data between the same participant and is also referred to as a one-way repeated-measures ANOVA (Field, 2013). This test requires the Mauchly's Test of Sphericity, a test similar to Levene's Test for Equality of Variance, except that it compares the variances of three pairs or more of the within-subject data in assessing the homogeneity of variance (Field, 2013). For this study, it was comparing the OS, SES, and SIS scale with each other. When Mauchly's Test is nonsignificant ($p > .05$), sphericity can be assumed, reducing the possibility of rejecting a true null hypothesis during hypothesis testing (Field, 2013). A one-way repeated-measures ANOVA also requires normal data distribution, which has been previously determined to be valid (Field, 2013).

Sample Characteristics for Demographic Data

The parent demographic data reflected a sample comprised of mostly White (89.16%), suburban (80.72%), and married (72.29%) individuals. All had at least a high school education with a high percentage of parents with graduate degrees (28.92%). Over 65% of the parents endorsed a household income of $100,000 per year or more. In response to parent mental health disorders, 28.92% of parents endorsed having an anxiety disorder and 24.10% endorsed having a depressive disorder. One participant chose not to respond to questions about age and ethnicity, and two participants chose not to respond to items about household income and parental mental health. The parent demographic data is displayed in Table 4.1.

Table 4.1

Parent Demographic Data

Variable	n	%
Gender	83	
Women	77	92.7
Men	4	4.82
Transgender	1	1.2
Gender non-conforming	1	1.2
Age	82	
30 – 39	13	15.9
40 – 49	38	46.3
50 – 59	23	28.0
60 – 69	8	9.7
Ethnicity*	82	
American Indian	3	3.61
Asian	5	6.62
Black/African American	4	4.82
Hispanic/Latinx	2	2.41
White/Caucasian	74	89.16
Level of Education	83	
High school	6	7.23
Some college	14	16.86

Table 4.1

Parent Demographic Data

Variable	n	%
Bachelor's degree	26	31.33
Some graduate school	13	15.66
Graduate degree or higher	24	28.92
Annual Household Income	81	
15,000 – 29,999	3	3.61
30,000 – 49,999	4	4.82
50,000 – 74,999	10	12.05
75,000 – 99,999	10	12.05
100,000 – 150,000	20	24.1
>150,000	34	40.96
Geographic Setting		
Urban	12	14.46
Suburban	67	80.72
Rural	4	4.82
Parent Relationship Status		
Married	60	72.29
Single	7	8.43
Divorced	12	14.46
Widowed	1	1.2
Partnered	3	3.61
Parent Mental Health Diagnosis	83	
Yes	38	45.78
No	43	51.81
Type of Diagnosis*	38	
Anxiety	24	28.92
Depression	20	24.10
PTSD	13	15.66
ADHD	3	10.84
Dysthymia	3	3.61
Bipolar	3	3.61
OCD	1	3.61
Adjustment	1	1.2
Personality	1	1.2
Other/Not Listed	1	1.2

*Parents were able to select more than one option in this category.

The demographic data of the youth, as indicated by parental report, were primarily adolescents (74.70%), primarily female (55.42 %), and primarily White (85.54%), though parents could endorse more than one category for ethnicity for their child, and based on the data, often did. As to be expected based on the criteria for the survey, anxiety (83.13%) and

depression (54.22%) were the most highly endorsed mental health categories, followed by ADHD (38.55%), and Post-Traumatic Stress Disorder (PTSD; 20.48%). The majority of youth were in middle school (24.09%) or high school (34.94%). The categories of ethnicity and education have an $N = 82$, due to participant choice of "prefer not to answer." The youth demographic data is displayed in Table 4.2.

Table 4.2

Youth Demographic Data

Variable	N	%
Gender		
Female	46	55.42
Male	31	37.35
Transgender	1	1.2
Gender non-conforming	5	6.02
Age		
0 – 10	8	9.64
11 – 20	62	74.70
21 – 30	13	15.66
Ethnicity*		
American Indian	3	3.61
Asian	3	3.61
Black/African American	9	10.84
Hispanic/Latinx	7	8.43
White/Caucasian	71	85.54
Pacific Islander	1	1.2
Other	3	3.61
Level of Education		
Kindergarten – 5th grade	11	13.24
6^{th} – 8^{th} grade	20	24.09
9^{th} – 12th grade	29	34.94
High school graduate	8	9.64
Some college	11	13.24
College graduate	3	3.61
Type of Diagnosis*		
Anxiety	69	83.13
Depression	45	54.22
ADHD	32	38.55
PTSD	17	20.48
Autism	10	12.05
Phobias	10	12.05
Adjustment	6	7.23
Borderline Personality Disorder	6	7.23
Substance Abuse	5	6.02
OCD	3	3.61
Eating Disorder NOS	3	3.61
Bipolar	2	2.41
Personality Disorder not listed	2	2.41

*Parents were able to select more than one option in this category.

Results by Alternative Hypotheses

Alternative Hypothesis 1: Parent Demographic Variables (Age, Gender, Relationship Status, Geographic, Ethnicity, Income, Education) Will Predict Differences in Caregiver Strain Scores Across the Three Subscales of the CGSQ.

The alternative hypothesis examines whether demographic variables predict parent strain. The null hypothesis states there would be no impact: H_0 Parent demographic variables will not predict caregiver strain scores across the three subscales of the CGSQ. The alternative hypothesis states a relationship does exist between demographic variables of the parents and caregiver strain scores: H_1 Parent demographic variables will predict differences in caregiver strain scores across the three subscales of the CGSQ. The following explicates the statistical analysis of each parent demographic variable.

Gender. As previously stated, the respondents were predominantly female (n = 77). This did not allow for statistical analysis between groups in the gender category. Accordingly, neither the null hypothesis nor the H_1 could be accepted or rejected.

Age. On the survey, the age demographic was a category the respondent entered as a whole number. For simplicity of data presentation, this was re-configured into age groups in the summary of the demographic study results in Table 4.1 Parent Demographic Data. However, in answering the research question of whether age impacts caregiver strain, the data for age was computed as a continuous variable. In assessing whether parent age predicted differences in caregiver strain scores across the three subscales of the CGSQ, parent age and their respective CGSQ scores were analyzed in IBM SPSS Statistics software (SPSS). Two respondents chose "prefer not to answer" for this question (n = 81). The correlation for age and the OS subscale was not significant (r = .003, df = 80, p > .05, NS.). The correlation for the SES subscale was also not

significant (r = -.104, df = 80, p > .05, NS). Finally, the SIS subscale was not correlated with age and was not significant (r = -.096, df = 80, p > .05, NS). The data did not support age as a predictor the higher scores across the three CGSQ subscales. This provided partial evidence to support the null hypothesis.

Ethnicity. A major issue when examining ethnic groups was the high percentage of participants who endorsed White (N = 74) on their survey in comparison to other endorsed ethnic groups (N = 9), where there was more scatter. As a result, the researcher chose to break the demographics into White and Non-White groups for analysis. The means for each ethnic group and CGSQ subscale were computed, which is shown in Table 4.3. A *t*-test was utilized in determining statistical differences between the two independent variables and CGSQ subscale scores (Field, 2013). The *t*-test comparing the demographic categories of ethnicity indicated no significance (p > .05), which provides additional support for the null hypothesis being accepted. The ethnicity demographic did not predict caregiver strain scores across the three subscales of the CGSQ. The results are summarized in Table 4.4.

Table 4.3

CGSQ by Ethnic Group

CGSQ Subscale	Ethnic group	N	Mean (SD)	SEM
OS	Non-White	8	2.363 (.888)	.313
	White	74	2.192 (.871)	.101
SES	Non-White	8	2.187 (1.24)	.440
	White	74	2.030 (.804)	.093
SIS	Non-White	8	3.125 (1.04)	.371
	White	74	2.842 (.906)	.105

Table 4.4

t-test for Ethnic Group

CGSQ Subscale	t	df	Significance (two-tailed)	Mean difference	Standard error difference
OS	.526	80	.601	.170	.324
SES	.495	80	.622	.157	.317
SIS	.826	80	.411	.282	.342

Education. When investigating the relationship between level of education and the three subscales of the CGSQ, a fairly high percentage of participants endorsed having completed college and beyond (75.91%). Therefore, the data was divided between two groups: below 16 years of education (n = 20) or 16 years of education or higher (n = 63). The means of the three CGSQ subscales for both groups were computed which is shown in Table 4.5. A *t*-test was utilized to compare the means of the two independent variables with their respective CGSQ scores across all three subscales (Field, 2013). The *t*-test comparing the demographic categories of level of education indicated no significance ($p > .05$), providing added support for the null hypothesis being accepted. The level of education demographic did not predict caregiver strain scores across the three subscales of the CGSQ. The results are summarized in Table 4.6.

Table 4.5

CGSQ by Level of Education

CGSQ Subscale	Level of Education	N	Mean (SD)	SEM
OS	Below 16 years	20	1.978 (.644)	.144
	16 years or higher	63	2.238 (.912)	.114
SES	Below 16 years	20	2.257 (.489)	.109
	16 years or higher	63	2.551 (.789)	.099
SIS	Below 16 years	20	2.642 (.742)	.165
	16 years or higher	63	2.607 (.898)	.113

Table 4.6

t-test for Level of Education

CGSQ Subscale	t	df	Significance (two-tailed)	Mean difference	Standard error difference
OS	-1.180	81	.242	-.259	.220
SES	-1.569	81	.121	-.293	.187
SIS	.158	81	.874	.035	.221

Household Income. In assessing whether household income predicted differences in caregiver strain scores across the three subscales of the CGSQ, household income and the respondents' respective CGSQ scores were analyzed in SPSS. Household income is a continuous variable. Two respondents chose "prefer not to answer" for this question (n = 81). The correlation for the income and OS subscale was not significant (r = -.100, df = 81, p > .05, NS.). The correlation for income and the SES subscale was also not significant (r = -.089, df = 81, p > .05, NS). Finally, the SIS subscale and income correlation was not significant (r = -.178, df = 80, p > .05, NS). The data did not support income as a predictor of scores across the three CGSQ subscales. Further evidence of the null hypothesis was provided.

Geographic Location. Only urban and suburban categories were compared as the third category, rural, could not be computed due to the small number who endorsed this choice in the sample (n = 4). The two independent variables, urban (n = 12) and suburban (n = 67), were compared with the respective three subscales of the CGSQ. First, the means were computed which is shown in Table 4.7. A *t*-test was utilized to determine if any statistical significance was identified (Field, 2013). The results indicated no differences between the two groups in their reporting on the three sub-scales of the CGSQ (Field, 2013). The geographic location

demographic did not predict caregiver strain scores across the three subscales of the CGSQ, providing further evidence for the null hypotheses. The results are summarized in Table 4.8.

Table 4.7

CGSQ by Geographic Location

CGSQ Subscale	Geographic location	N	Mean (SD)	SEM
OS	Urban	12	2.202 (.958)	.276
	Suburban	67	2.179 (.860)	.105
SES	Urban	12	2.476 (.700)	.202
	Suburban	67	2.486 (.760)	.092
SIS	Urban	12	2.535 (.839)	.242
	Suburban	67	2.618 (.880)	.107

Table 4.8

t-test for Geographic Location

CGSQ Subscale	t	df	Significance (two-tailed)	Mean difference	Standard error difference
OS	.085	77	.933	.023	.274
SES	-.042	77	.966	-.009	.235
SIS	-.301	77	.764	-.082	.265

Relationship Status. The survey responses to the relationship status question were separated into two categories, single (n = 20) and in a relationship (n = 63). The means of the three subscales of the CGSQ for both groups were computed and are reflected in Table 4.9. In order to detect differences between these two groups and their CGSQ scores, a *t*-test was utilized (Field, 2013). There was no significance ($p > .05$) found for the relationship status variables on the three subscales of their CGSQ scores. Hence, relationship status did not predict caregiver

strain scores and the null hypothesis had additional support. The results are summarized in Table 4.10.

Table 4.9

CGSQ Subscales by Relationship Status

Subscale	Relationship Status	N	Mean (SD)	SEM
OS	Single	20	2.307 (.712)	.159
	In a relationship	63	2.133 (.902)	.113
SES	Single	20	2.535 (.595)	.133
	In a relationship	63	2.462 (.779)	.098
SIS	Single	20	2.764 (.926)	.207
	In a relationship	63	2.569 (.838)	.105

Table 4.10

t-test for Relationship Status

CGSQ Subscale	t	df	Significance (two-tailed)	Mean difference	Standard error difference
OS	.784	81	.435	.173	.221
SES	.385	81	.701	.073	.190
SIS	.884	81	.379	.195	.220

Parent Mental Health Diagnosis. A high number of parents endorsed their own mental health diagnosis in this sample. The group of parents (n = 38) who positively endorsed a mental health diagnosis and the group who did not (n = 43) was correlated with their scores across the three CGSQ subscales. The means were computed which is shown in Table 4.11. A *t*-test was utilized to compare means and determine if any statistical significance was identified between the two groups and their respective CGSQ scores on all three subscales (Field, 2013). No significance (p > .05) was found, providing more support for the null hypothesis. The results are

summarized in Table 4.12. Overall, none of the demographic variables analyzed predicted caregiver strain scores on the CGSQ. The first alternative hypothesis is rejected and the null hypothesis accepted.

Table 4.11

CGSQ by Parent Endorsement of Mental Health Diagnosis

CGSQ Subscale	Parent MH Diagnosis	N	Mean (SD)	SEM
OS	Yes	38	2.148 (.874)	.141
	No	43	2.266 (.883)	.134
SES	Yes	38	1.940 (.708)	.114
	No	43	2.174 (.937)	.143
SIS	Yes	38	3.021 (.918)	.149
	NO	43	2.744 (.915)	.139

Table 4.12

t-test for Parent Endorsement of Mental Health Diagnosis

CGSQ Subscale	t	Df	Significance (two-tailed)	Mean difference	Standard error difference
OS	-.063	79	.548	-.118	.195
SES	1.25	79	.214	-.233	.186
SIS	1.36	79	.178	.277	.204

Alternative Hypothesis 2: Parents Will Endorse Significant Caregiver Strain Scores Across the Three Subscales as Measured by the CSGQ

The second hypothesis predicted differences between subscales scores for each respondent. The null hypothesis would indicate there would be no differences between subscales for each respondent: H_0 Parents will not endorse significant scores across the three subscales of

the CGSQ. To test this hypothesis, a Test of Within-Subjects Effects was performed. Parents did report statistically significant ($p < .01$) differences between their CGSQ subscale scores. This is displayed in Table 4.13. The alternative hypothesis was accepted and the null hypothesis rejected.

Table 4.13

Tests of Within-Subjects Effects

Source		Type III Sum of Squares	df	Mean Square	F	Sig.
CGSQ Subscale	Sphericity Assumed	31.382	2	15.691	58.294	.01**
Error	Sphericity Assumed	44.144	164	.269		

*Ccorrelation is significant at the 0.01 level.

Alternative Hypothesis 3: Age of the Youth is Predictive of Type or Severity of Caregiver Strain as Measured by Clinically Significant Scores on the CGSQ

The third hypothesis assessed whether the age of youth correlated with increased scores on the CGSQ. The null hypothesis states age is not a predictor of caregiver strain: H_0 Age of youth is not predictive of caregiver strain scores as measured by the three subscales of the CGSQ. This relationship was examined using Pearson Correlation Coefficients. The results were not significant for the OS subscale ($r = -.091$, $df = 82$, $p > .05$, NS), the SES subscale ($r = -.098$, $df = 82$, $p > .05$, NS), and the SIS scale ($r = -.053$, $df = 82$, $p > .05$, NS). The data did not support a correlational relationship, providing no support for the third hypothesis. The youth's age was not a predictor of caregiver strain. The null hypothesis was accepted.

Alternative Hypothesis 4: Age of Youth Will Predict Level of Parent Optimism With Older Youth Positively Correlated With Higher Parent Optimism as Measured by the LOT-R.

The fourth hypothesis investigated the strength of relationship between youth's age and parent's LOT-R scores. The null hypothesis would state there is no relationship: H_0 Age of youth is not predictive of parent optimism LOT-R scores. Using Pearson Correlation Coefficients, the relationship between age of youth and LOT-R scores were examined. The correlation was not significant (r = .184, df = 82, p > .05, NS). This indicates no correlation and the null hypothesis is accepted.

Alternative Hypothesis 5: It is Predicted That Parents of Youth With Multiple Diagnoses Will Report Higher Levels of Strain on the CGSQ Than Parents of Those With a Single Diagnosis.

The fifth hypothesis examined whether the number of diagnoses endorsed by parents for their respective youth was a predictor of higher CGSQ scale scores, with high CGSQ scores reflecting higher levels of parent strain. The null hypothesis would state there is no relationship between the number of youth diagnoses and parent CGSQ scores: $H_{0.}$ The number of youth diagnoses does not predict CGSQ scores. The youth's number of diagnoses (N = 83) was divided into a single diagnosis category (N = 60) or a two or more diagnoses category (N = 23). A t-test was utilized to compare means and determine if any statistically significant difference was identified (Field, 2013). The SIS subscale was significantly higher (p > .05) for parents of youth with two or more diagnoses with a correlation of .048. The results are summarized in Table 4.14 and Table 4.15. This data provided support for the hypothesis that caregiver strain is greater for youth with multiple diagnoses, specifically on the SIS subscales. The alternative hypothesis was accepted and the null hypothesis rejected.

Table 4.14

CGSQ by Number of Youth Diagnoses

CGSQ Subscale	Number of Youth Diagnoses	N	Mean (SD)	SEM
OS	1	60	2.174 (.858)	.110
	2 +	23	2.264 (.911)	.189
SES	1	60	2.004 (.859)	.110
	2+	23	2.141 (.811)	.169
SIS	1	60	2.738 (.862)	.111
	2+	23	3.181 (.992)	.206

Table 4.15

t-test for Number of Youth Diagnoses

CGSQ Subscale	t	df	Significance (two-tailed)	Mean difference	Standard error difference
OS	-.423	81	.673	-.090	.214
SES	-.661	81	.511	-.137	.207
SIS	-2.005	81	.048	-.442	.220

**Correlation is significant at the 0.05 level.

Alternative Hypothesis 6: Higher Optimism Caregiver Scores as Measured by the LOT-R Measure Will be Associated With Lower Caregiver Strain Across all 3 Subscales of the CGSQ.

The sixth hypothesis examined the relationship between levels of optimism and severity of parent strain with optimism measured by the parents' LOT-R score, and higher parent strain as indicated by higher scores on the three CGSQ subscales. The null hypothesis states that LOT-R scores do not predict caregiver strain: H_0 Parent LOT-R scores do not predict lower CGSQ scores across the three subscales. To determine the relationship between those scores, Pearson Correlate Coefficients were calculated. Higher LOT-R scores did negatively predict lower CGSQ scores across all three scales. The correlation between the LOT-R scores and three subscales

were significant ($p > .05$): the OS subscale ($r = -.221$, $df = 82$, $p > .05$), SES subscale ($r = -.335$, $df = 82$, $p > .05$), and the SIS scale ($r = -.379$, $df = 82$, $p > .05$). Of note, the SIS subscale had a particularly strong correlation. This data provides support for the alternative hypothesis, which is accepted, and the null hypothesis is rejected.

Alternative Hypothesis 7: It is Predicted That Parents of Youth With Multiple Diagnoses Will Report Lower Optimism as Indicated by Lower LOT-R scores Than Parents of Those With a Single Diagnosis.

The final hypothesis addressed the relationship between parent optimism for those who have a youth with one reported diagnosis versus those who have youth with two or more diagnoses. The null hypothesis states that parent LOT-R scores are not predicted by the number of youth diagnoses: H_0. The number of diagnoses of youth does not predict parent LOT-R scores. The youth diagnosis category was divided into two groups: a group for youth with one reported diagnosis ($n = 60$) and a group for youth with two or more reported diagnoses ($n = 23$). A *t* test was performed to compare means and determine the level of statistical significance, if any. For the parents of youth who reportedly had two or more diagnoses, the correlation was significant ($p > .05$) with lower LOT-R scores when compared to parent LOT-R scores of youth with only one diagnosis. This indicates that parents of youth with two or more diagnoses did report lower optimism scores, supporting the alternative hypothesis. Hence, the null hypothesis was rejected.

Table 4.16

LOT-R by Number of Youth Diagnoses

LOT-R	Number of Youth Diagnoses	N	Mean (SD)	SEM
LOT-R	1	60	3.869 (.822)	.106
	2 +	23	3.420 (.721)	.150

Table 4.17

t-test for Number of Youth Diagnoses and LOT-R Scores

LOT-R	t	df	Significance (two-tailed)	Mean difference	Standard error difference
LOT-R	2.301	82	.024	.449	.195

**Correlation is significant at the 0.05 level.

CHAPTER V: DISCUSSION

Sample Demographics and Caregiver Strain

This study sought to evaluate the relationship between optimism and caregiver strain as it applies to parenting children diagnosed with anxiety and/or unipolar depression. It was hypothesized that parent demographic variables (age, gender, relationship status, ethnicity, geographic location, income, or level of education) would predict differences in caregiver strain. One surprising finding was the lack of correlation between demographic variables and caregiver strain. Some studies have also reported no relationship between caregiver strain and age, income, or gender (Bhullar et al., 2017). Conversely, other researchers have found a positive correlation between higher education and higher overall caregiver strain scores in families with youth diagnosed with severe emotional and behavioral disturbances (Munsell et al., 2016). Those researchers surmised that having a higher education might provide additional resources to the family that allowed for a greater focus on the child-parent relationship and highlighted the inherent challenges of parenting youth with significant psychological symptoms (Munsell et al., 2016). This dissertation also had a high preponderance of highly educated parents. However, no correlational relationship was supported by the data. Demographic variables such as being single, low income, lower levels of education, and reported parent mental health disorders such as anxiety and depression was associated with higher caregiver strain in other studies *(*Macedo et al., 2015). Additionally, minority caregivers with lower socio-economic status reported significantly higher caregiver strain (McManus et al., 2011). Perhaps the fact that the high percentage of parents who endorsed White as their ethnic category also reported less strain around accessing resources is due to other unidentified issues. For example, parents with greater

ethnic diversity might experience community bias and structural barriers to resources that White parents do not. This is an area where additional research could provide greater clarity.

In this study, 45.78% of parents endorsed at least one mental health diagnosis, which in other research has been associated with higher levels of subjective external behaviors (Wang & Anderson, 2018). The findings of this study did not support that correlation, though this may be due to how the information was collected. This research study did not assess if the youth or parent were engaged in mental health services or the severity of impairment associated with the psychological disorders endorsed on the survey. Child behavior severity, an area not assessed in this study, is associated with seeking mental health treatment by caregivers (Wang & Anderson, 2018). It is possible that the convenience-based, self-selected participant sample in this study is not homogenous with parents and caregivers of children who are directly recruited for research from community and private mental health clinics where their children are receiving services.

This study predicted that parents would endorse different types and levels of caregiver strain. Previous research has shown that internalizing problems in youth predicted higher subjective internalization by their caregivers (Brannan & Heflinger, 2006). This study did reflect a higher preponderance of internalizing disorders endorsed for the youth, such as anxiety (83.13%) and depression (54.22%). Parents also endorsed higher subjective internalization when their youth had two or more diagnoses. Higher subjective internalization has also been reported in studies of parents of youth seen in emergency centers for psychological issues (Molteni et al., 2017). As such, the results of the present study were consistent with previously reported research in this area. It should be noted that this study did not utilize specific measures for assessing internalizing and externalizing behaviors in youth, and similarities in the data between the two studies can only be tentatively surmised.

Other studies have supported higher caregiver strain across the three categories examined in this study: objective, subjective external, and subjective internal. For example, in previous research, caregivers of youth who were assessed with high levels of both internalizing and externalizing behaviors endorsed high caregiver strain scores across all three areas (Vaughan et al., 2012). In another study of 218 caregivers from a community mental health center, youth behavior severity was positively correlated with higher caregiver strain (McCarthy et. al., 2016). Some studies reported improvement in objective strain with youth that had more severe psychological symptoms over the course of treatment, however subjective externalized and subjective internalized experiences of parents did not similarly improve over time (Accurso et al., 2017). As previously stated, this dissertation research did not specifically assess the level of internalizing or externalizing behaviors or attempt to rate severity of symptoms of the youth on which the participants based their answers. It is possible that collecting more information in this area might have provided more data to clarify differences in the caregiver report of this research sample versus caregiver samples of other analogous research.

Parent Optimism

There was an association between higher parent optimism and lower overall caregiver strain. This aligns with existing literature research which reports that mothers with higher levels of optimism experienced less stress and were less psychologically impacted by their children who had been diagnosed with significant behavior disorders (Blacher & Baker, 2019). Parent optimism has also been associated with overall better physical health (Taylor et al., 2010). As existing research suggests that optimism in parents of children with intellectual challenges serves as a protective coping factor, it is also possible that optimism could be a protective factor for parents of youth with anxiety and/or unipolar mood disorders (Kurtz & McIntyre, 2017).

Conversely, parents of youth in this study with multiple diagnoses, indicating a more complex psychological presentation, reported lower levels of optimism. Parents of youth who engage in NSSI have also reported significantly less optimism than control group parents (Whitlock et al., 2018). Youth who engage in NSSI were also known to have multiple diagnoses (Whitlock et al., 2018). While a relationship between youth with increased psychological diagnoses and reduced parent optimism exists, the precise nature of it remain unclear. Optimism was associated with reduced caregiver strain in parents in this study and worthy of future exploration.

Limitations

Impression management is a potential threat to the psychometrics of examining optimism (Kasdan et al., 2002). Also, optimism, optimistic biases, and the perception of burden may be based on judgments by the participants that are not universally defined, which impacts the validity of the data (Schneider, 2001). This is a general challenge often faced by social science research and not specific to this study (Schneider, 2001). Further, there is inherent bias in recruiting for survey research as missing data is often a concern, and data cannot be collected from those who choose to not respond (Regmi et al., 2016). This reduces the ecological validity of the results. Also, online surveys favor those with stronger internet skills (Regmi et al., 2016).

With regard to this sample composition, the self-selected, convenience-based sample was heavily comprised of highly educated, high income, White women who live in suburban communities. As such, the data does not necessarily reflect the experiences of non-White parents, male parents, parents with less education or lower incomes, or those who may live in significantly different communities. This strongly impacts the ecological validity of the data and limits the generalizability of the findings to populations outside the narrow scope we were able to obtain. It also may have reduced variability in the measures collected.

Significantly, there was an unprecedented worldwide pandemic occurring at the time of the study and it is unclear what impact, if any, it had on respondents. It is possible that the participants were experiencing more general worry and other negative internalized emotion in relation to the impact of the pandemic on their home and community. Equally, being faced with serious illness and mortality might influence parents to focus on more positive aspects of their parenting experience in appreciation of the importance of family in such times.

Finally, the survey primarily collected descriptive and correlational data, which cannot be used to establish causality. Given these issues in totality, the results of the study should be used with caution, requiring further research before firm conclusions can be drawn.

Future Directions in Research

This study highlights future avenues for research. The methodology of this study could be developed into a larger study with a matched control group of parents of youth with no diagnosed psychiatric disorders to increase the ecological validity of the data, and to gather additional information about level of parent optimism and strain. Gathering data that directly assesses the severity of the patient's diagnosis would help elucidate the nexus to caregiver burden and strain (e.g., hospitalizations, use of psychotropic medication, etc.). The ecological validity of the sample would be improved by including a wider demographic range, such as the inclusion of more fathers.

Future studies could also utilize in-person or Zoom-based interviews to support the veracity of the youths' diagnoses, reducing potential confounds of parents reporting inaccurate diagnoses. Using an interview-based methodology would also allow for the analysis of qualitative data regarding parent optimism and caregiver strain. Participants could also be further matched for gender, income, or other significant demographic variables to re-examine the

relationship of demographic variables and their influence on caregiver strain. Being able to accurately identify parents who might need more support or intervention to reduce caregiver strain would allow researchers to effectively utilize their resources.

Pilot studies could be developed to test various interventions, focusing on improving optimism and addressing directly the consistent higher report of negative internalized emotion for parents. There are currently mindfulness-based curriculums that could be implemented to promote optimistic coping styles and/or to reduce negative internalizing emotions. These interventions are not aimed to improve parenting skills, per se, but to support the individual in the parenting role cope more effectively with the strain of raising children with psychological disorders. In addition, some recent research supported that the parent-child relationship accounted for at least a third of the variance in child behavior severity and caregiver strain (Frank et al., 2017). Focusing on improving parent-child interactions may also be a useful direction for future researchers. Ultimately, by reducing caregiver strain, parents and their respective youth would all benefit.

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APPENDIX A

Sample Demographic Survey

Appendix A: Sample Demographic Survey

1. What is your identified gender: male, female, other (transgender, gender non-conforming, not listed here)
2. How old are you? (choose age from drop box of 18-100)
3. What racial or ethnic group(s) do you most identify as? (American Indian/Native American, Asian, Black/African American, Hispanic/Latino, White/Caucasian, Pacific Islander, Other)
4. What level of education have you completed? (drop box of years of schooling 8-22)
5. What is your annual household income? (drop box from 0 amount to over 100,000)
6. Are you married, single, divorced, widowed, partnered, other?
7. Would you describe your current residence in a neighborhood that is urban, suburban, or rural?
8. Do you have a mental health diagnosis? If no, participant moves to next question. If yes, which one(s) (dropbox listing possible examples: ADHD, anorexia nervosa, bulimia, anxiety disorder, bipolar disorder, borderline personality disorder, depression disorder, dysthymic disorder, obsessive compulsive disorder, panic attacks, post-traumatic stress disorder, schizophrenia, and substance abuse problem).
9. What is the identified gender of the youth you are completing the survey for: male, female, other (transgender, gender non-conforming, not listed here).
10. How old is the child you are completing the survey for? (choose age from drop box 0-100)
11. What racial or ethnic group(s) does the youth most identify as? (American Indian/Native American, Asian, Black/African American, Hispanic/Latino, White/Caucasian, Pacific Islander, Other)
12. What level of education has the youth you are completing the survey for completed? (drop box of years of schooling 0-22)
13. What diagnoses have the youth you are completing the survey for currently have? (dropbox: ADHD, anorexia nervosa, bulimia, anxiety disorder, bipolar disorder, borderline personality disorder, depression disorder, dysthymic disorder, obsessive compulsive disorder, panic attacks, post-traumatic stress disorder, schizophrenia, and substance abuse problem).