

THE RELATIONSHIP BETWEEN PARENTAL STRESS AND ADOLESCENT
EXTERNALIZING BEHAVIOR – THE MEDIATING ROLE OF FAMILY FUNCTIONING
ON ETHNICALLY DIVERSE FAMILIES IN MULTISYSTEMIC THERAPY

by

Jennifer Denise Vincas-Cua

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Philosophy

Liberty University

August 2020

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2020

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Abstract

Parental stress is an expected phenomenon during the parenting of an adolescent. Higher levels of parental stress are associated with an adolescent with externalizing behavior. Parents are instrumental in the development of adolescents and are critical agents of change with youth problematic behavior. Family functioning is often determined in part by a parent's ability to adequately respond and manage their adolescent's behavior and their environment. Focusing on improving family relations has been known to positively impact both parent and adolescent. Multisystemic therapy is a well-known treatment for adolescent externalizing behavior and families of diverse ethnicities. Additional attention and resources examining the impact of family functioning on parental stress and adolescent externalizing behavior is lacking, including the role of ethnicity in the family. This study established the relationship between parental stress and adolescent externalizing behavior. This study found family ethnicity (African American, Caucasian and Latinos) to be a moderator between parental stress and adolescent externalizing behavior. Family functioning particularly family cohesion and not family adaptability was found to be a mediator between this relationship. Lastly, there were no significant differences between ethnic family's pretest and posttest reporting of family functioning. The results, implications, limitations, and recommendations for future research and social advocacy was discussed, as they relate to therapists, supervisors, researchers, and counselor educators with the goal of enhancing treatment results for parents with parental stress, adolescents with externalizing behavior, and how family functioning across family ethnicity/ racial groups can be leveraged during times of heightened parental and psychosocial stress.

Keywords: parental stress, life stressors, external stressors, adolescent externalizing behavior, family functioning, family adaptability, family cohesion, ethnicity, Multisystemic therapy

Dedication

This accomplishment is dedicated to the families I have journeyed with in New York City and abroad during my days as a case worker, youth ministry director, therapist, supervisor, and consultant. Your pain did not go unnoticed. Your family went through so much, but your story is not finished yet. You taught me many lessons and I will not stop striving to grow, learn, and serve many others because of your story.

It is now clear to me that the family is a microcosm of the world. To understand the world, we can study the family: issues such as power, intimacy, autonomy, trust, and communication skills are vital parts underlying how we live in the world. To change the world is to change the family.

– Virginia Satir

Acknowledgments

Surely goodness and mercy shall follow me all the days of my life: and I will dwell in the house of the Lord forever. – Psalm 23:6 (KJV)

This has been an incredible journey and the fruit of this labor is a culmination of a lifelong dream. The fulfilment of this part of my calling was challenging and I often wrestled with accepting that the ideal environment should entail having low resistance to fulfill my responsibility. Like many things that are worth the sacrifice, there are always associated challenges and pressures. In pursuit of gathering the pearl, there must be a process of extreme pressure to produce this treasure. It is the discomfort and pressure that forces you to break the mold of stagnation and pushes you to grow and learn beyond your limited capacity. I stand in utter awe of how vast and wide God's infinite love and wisdom is. This year of 2020 marks the worldwide impact of many changes including that of COVID-19 and the passing of several beautiful friends, colleagues, and family, including my grandpa and two honorary uncles. As life has come and gone, I also know that there has been the start of new life and resilience.

My family, MST family, Liberty family, Stonecrest Community church family, and Centro Cristiano Judá church family has been the sustaining love that has seen me through the victories and battles. I have experienced this dissertation topic through the palpable moments of family unity and adaptability through the steep learning needed to overcome this year's challenges and stressors. There is much gratitude to be expressed and this completion would not have been possible without God's grace in the form of loving people. This section is to honor the many men and women who contributed to my doctoral journey. May this incredible sacrifice of time and resources shape me to be a better wife, mother, daughter, sister, advocate, researcher, counselor, and educator because you all poured into this vessel for God's purpose.

First, I would like to thank my family for their love, sacrifices and support. My husband, Dexter, for supporting my dreams as your actions speak louder than words. You never allowed me to quit and reminded me that our beautiful little family was waiting for me at the finish line. Thank you for your vision and leading our family and co-creating the family I always longed for. Your love has been my strength throughout many seasons. To my firstborn, Caleb Elias, you are the son I prayed for. Your strength and your empathetic heart give you an ability to perceive and understand the emotions of others beyond your years. Certainly, you will be that engineer and visionary for the times to come. To my second born, Gabriel Benjamin, your tenacity and curiosity are already markings of a great leader. You, too, will lead others with your bold persona, as you captivate when you walk into any room. To my dad, Edgar, your lifelong example as a passionate lover of education and servant leader served as my lifelong template in pursuit of this degree. Your constant prayers and love were my lifeline. The countless hours spent helping me with school, work, and ministry easily qualifies you to have an honorary Dr. Vines to your name. To my mom, Blanca, your fierce strength, and unwavering faith taught me that battles were won praying on your knees. Thank you for loving my boys and watching over them in my travels. Thank you for your tireless energy and acts of service to help me make my house a home. To my sister, Christine, your ability to stand up for injustice on those you love taught me my first lessons in advocacy. You have been my constant companion and best friend and life would not be as fun without you. To my brother, Jeremy, your words were always so encouraging and timely. You are a testimony of love, compassion, and strength. I love how we can share from our hearts with no judgement. To my mother-in-law, Azucena, and father-in-law, Charles, thank you for loving me as a daughter and especially for loving my boys. To my paternal great grandfather, Eleuterio Alvarado, who was a humble pioneer in spreading the

gospel in Ecuador and, despite life dedicated to serving the community as a teacher, who was not able to witness the fruit of his work. I hold the first doctorate on this side of our family, and this is a testament to God's faithfulness. To my maternal grandmother, Teodora Contreras, you were the matriarch of the family and faithfully led all your children to the feet of Christ. Your sacrifices in working extra jobs to send your children for a better education in the city was worth it. I am a product of your work ethic and belief of education.

Second, I would like to thank my dissertation committee for the ongoing patience when there were life setbacks and continuing to support and encourage me to step forth with confidence that I would successfully get through this last stretch.

To Dr. John Thomas, you have been the constant well of wisdom during this dissertation. Despite having several projects and chairing other dissertations, you said yes and soothingly outlined your expectations and guided me in this process. I will never forget our first class together for supervision and consultation and wanting to follow more in your footsteps. Years later, I got the honor to work with you in this important step of my doctoral journey. You were absolutely central to the completion of my dissertation and thank you for your ongoing modeling.

To Dr. Joy Mwendwa, thank you for modeling incredible discernment and skill in all you do. It was wonderful to see you lead as faculty facilitator for our CSI Rho Eta chapter and the opportunity to serve with you. Your care and concern for me throughout my second pregnancy and after was impressed upon me. Thank you for being an amazing educator and for speaking your life passion into my dissertation in bringing your expertise for families to life.

To Dr. Melvin Pride, thank you for being the voice of wisdom and calm during the first time we met for Practicum. It was quite the busy season in my family, but I looked forward to

learning so much for your feedback on sessions. Your voice has been integrated to this dissertation and I am grateful for your years of experience in this field shining through.

To Dr. Phillippe Cunningham, your voice in the field for families will be known for many generations. I will never forget your role in New York City and the start of the MST programs for ACS. Years later, your work allowed me to understand families in a new way. Thank you for your kindness and jokes even if it is at the expense of NYC folks. Thank you for modeling holding multiple hats as researcher, consultant, business owner, and many others. I am immensely grateful for the opportunity you gave me.

Also, a special thanks to Dr. Sharon Foster and Dr. Patricia Brennan for your incredible service in research for families. Your years of dedication has brought life giving change to countless families and without your research, this would not be possible.

To Dr. Yuane Jia, our paths crossed in a unique and very meaningful way. Your gifts in research methods and statistics helped me acquire new tools to bring to life another facet of these families' precious story. Your ongoing patience and gentle reminders that "Dissertation is a process, enjoy the process" helped me be more patient with myself as this part of my dissertation stretched me.

To Dr. Lisa Sosin, thank you for pouring into me and so many other students. Your words were a constant reminder of our potential. Your standards pushed me the hardest and taught me that excellence, at this level, was needed. Thank you for praying for and with me during difficult times. I am indebted to you.

Special thanks to Dr. Mary Deacon, for her role in living out leadership and service in counseling and inspiring me to commit to this profession for a lifetime. Thanks for encouraging

me to pursue the opportunities for service and servant leadership in our field. Our discussions made lasting contributions to my emerging counselor educator identity.

To my first MST consultant, Dr. Jeff Randall, and my second consultant, Melina Napoli, thanks for your service to families in New York City that were often voiceless and marginalized in my Queens community. Your passion inspired me and fueled my aspiration to be a consultant. Dr. Randall, your role as a lifelong social advocate and champion for minorities helped write a chapter in my own professional development as a Latina.

To my beloved MST family, thank you for your instrumental role in shaping me as a therapist, supervisor, and consultant through your topnotch training, feedback, and supervision. I am so grateful for the chance to have served families around the world, because you saw I would persist with tireless fight to be better and change one family at a time. To my MST leaders: my coach, Dr. Laura Shortt; my clinical director, Dr. Lisa Reiter; my first coach, Brenda Szumski; my mentor and orientation trainer, Lori Moore; my TSS Division director, Michelle Dean; my colleague, Kellie Allison; Co-CEO, Josh Glade; my director, Keller Strother; and founder, Dr. Scott Henggeler, thank you for allowing me the opportunity to live out my passion to serve families.

To Dr. Laura Marinn Pierce, thank you for allowing me to serve as the ASERVIC graduate student representative under your presidency. Your mentorship has shown me leadership during challenging times for many in our profession. You saw my passion to serve and took a chance on me and I look forward to continuing to learn and work with you as chair for the Spiritual and Religious Values committee.

To Dr. Michael Mariska and the selection committee, thank you for selecting me as a NARACES Emerging Leader and for facilitating my desire to become more involved in serving the counseling profession.

I would also like to thank some amazing and inspirational counselor educators and professors who have encouraged and inspired me throughout the doctoral and dissertation journey. They include: Dr. Freddy Baez, Dr. James Chin, Dr. Brande Flamez, Dr. Ryan Foster, Dr. Deborah Foulkes, Dr. Fernando Garzon, Dr. Deborah Haskins, Dr. Victoria Kress, Dr. Sally Lau, Dr. Marcia Lucas, Dr. Leila Roach, Dr. Carol Robles, and Dr. Fred Volk. Thank you for pouring into countless students and professionals. Our profession of counseling has surely been shaped by your dedication and service.

To my empowered Latinas, Dr.'s Zoricelis Davila and Maureen Ponce, thank you for being part of my doctoral journey. Our sisterhood and friendship have been a constant encouragement. Our collaboration on conferences has helped me sharpen my scholarly writing skills. Each of you have contributed to my development as a woman of color in the field. Your voices will be heard and will add value to the field.

To Dr. Alysha Blagg, I would have never made it through dissertation without you. Our WebEx video chats and check-ins were life giving. So many times, I felt anxiety and confusion overtaking and each time, your words encouraged me to keep going. Your prayers were from God's mouth. Thank you so much for being my dissertation buddy to the end. I have gained a sister and friend for a lifetime.

To Dr. John Harrichand, I had the privilege of walking alongside you and learning to love counselor education from your testimony of leadership and service, even as a student to now

counselor educator and leader. You never ceased to encourage me and so many others. You were never too busy to help a fellow colleague along the way. Thank you so much.

To my colleagues who have graduated: Dr. Corinna Arndt, Dr. Henry Bruns, Dr. Eric Camden, Dr. Kristen Hauswirth, Dr. Heyde Luz, Dr. Daniel Reyes, Dr. Michael Trexler, and Dr. Michael Verona, your impact will surely be felt in this generation.

To my future counselor educators: Will Carroll, Sheri Cobarruvias, Laurie Crabb, Vivian France, Jennifer Gobble, Joey Gude, Melva Hartzog, Rebecca Hill, Sam Landa, Margaret Lee, Sharon Lewis, Kerry Mash, Ken Miller, Sandra Noble, Angela Waggoner, and others, keep at it and never give up. You are needed, so do not delay.

Finally, to my extended family, the Vincés', Cua's, Mendoza's, and Contreras', thank you for the prayers, support, and your words of encouragement. There is truly nothing in this world like family.

TABLE OF CONTENTS

Abstract	3
Dedication	4
Acknowledgements	5
List of Tables.....	14
CHAPTER ONE: THE PROBLEM	16
Background to the Problem	17
Purpose of the Study	18
Research Questions	18
Limitations/Delimitations	19
Definitions	20
Significance of the Study	22
Theoretical/Conceptual Framework	23
Summary	25
CHAPTER TWO: REVIEW OF THE LITERATURE	26
Parental Stress	26
Parental Stress Defined	27
Dimensions of Parental Stress.....	29
Parental Stress and Childhood Maladjustment Problems.....	30
Parental Stress and Adolescent Externalizing Behavior.....	32
Parental Stress and Family Functioning.....	32
Parental Stress Treatments.....	34
Adolescent Externalizing Behavior.....	36
Adolescent Externalizing Behavior Defined	36
Adolescent Externalizing Behavior Treatment.....	38
Family Functioning	41

Family Functioning Dimensions	42
The Mediating Role of Family Functioning	43
Summary	48
CHAPTER THREE: METHOD	49
Research Purpose.....	49
Research Questions and Hypotheses.....	51
Research Design	52
Selection of Participants	53
Instrumentation	54
Procedures	56
Data Processing and Analysis	57
Summary	58
CHAPTER FOUR: RESULTS	58
Restatement of the Purpose	59
Data Screening	59
Participant Demographic	60
Data Analysis.....	61
Research Question One.....	63
Research Question Two	66
Research Question Three	68
Research Question Four	72
Summary	74
CHAPTER FIVE: SUMMARY, CONCLUSIONS, & RECOMMENDATIONS	76
Summary of Findings	76
Summary of Demographics.....	76

Hypothesis One.....	77
Hypothesis Two.....	80
Hypothesis Three.....	81
Hypothesis Four.....	84
Implications for Practice	85
Implications for Counselor Education.....	89
Implications for Research	90
Recommendations for Future Research.....	91
Limitations of the Study	91
Summary	93
Study Summary	94
REFERENCES	97

Appendixes

Appendix A: IRB Approval	115
Appendix B: Permission to Use Data Set from Principal Investigator.....	116

List of Tables

Table 4.1 Demographic Information for Adolescent, Parent and Therapist.....	60
Table 4.2 Means and Standard Deviations of Variables Evaluated in the Study.....	62
Table 4.3 Paired Samples Test.....	63
Tables 4.4 Correlations between CBCL – Externalizing and SIPA and BTPS Change Score T1-T4.....	64
Table 4.5 Repeated Measures Analysis of Variance Adolescent Externalizing Behavior by Parental Sress.....	64

Table 4.6 Model Summary^b 65

Table 4.7 Regression Analysis Summary for Parental Stress Predicting Adolescent
Externalizing..... 65

Table 4.8 Descriptives for Adolescent Externalizing Behavior CBCL Externalizing Change
Score by race group..... 66

Table 4.9 Means and Standard Deviations of Mediator Variables Evaluated in the Study.72

**The Relationship Between Parental Stress and Adolescent Externalizing Behavior: The
Mediating Role of Family Functioning on Ethnically Diverse Families in Multisystem
Therapy**

Chapter I: Introduction to the Study

Parents are the most instrumental influencers of an adolescent's life. Seminal theorists view the parent-child relationship as foundational in modeling the necessary boundaries for social norms and other aspects of life development. In the home, it is not uncommon that adolescents with externalizing behavior problems often have conflictual parent-child relationships and parents, as a result, are more likely using negative and ineffective discipline strategies. Parental stress is experienced in these interactions as parental duties place high levels of demands and requires there be ongoing change and flexibility while maintaining the relationships that evolve over time within the family system.

Currently, our adolescent population is ever increasing as adolescents account for 25% of Americans and it is projected that by 2025, racial-ethnic minorities will account for 52% of the youth population under age 18, and by 2045 it will be 59% (Office of Juvenile Justice and Delinquency Prevention, 2019). It is expected that some adolescents will develop externalizing behaviors that are characterized by verbal and physical aggression, truancy, runaway, defiance, vandalism, substance use, and theft (American Psychiatric Association, 2013). Parental stress is likely with a child with externalizing behavior and other competing life demands, such as other children to rear, job responsibilities, household tasks, and health care and/or mental health care needs can impact the overall family functioning. High levels of parental stress have been linked to poor adolescent outcomes (Withers et al., 2016). Unmanaged parental stress can lead to parental burnout where there are three symptoms: emotional exhaustion, emotional distancing, and lack of parental efficacy (Roskam et al., 2017). Researchers have suggested that caregivers

with higher levels of parental strain are more likely to not keep their children at home or in the community and instead use psychiatric hospitals, medications, and residential placements (Wang & Anderson, 2018). Even with these sought treatment options, it has been found that parents with high caregiver strain are more likely to face difficulty in fully investing in treatment for their child (Piotrowska et al., 2017). However, families that adapt and work together during distressful times have shown to reach short-term and long-term outcomes for their adolescents (Rabinowitz, Osigwe, Drabick, & Reynolds, 2016).

Background of the Problem

Multisystemic therapy (MST) is an evidence-based treatment for addressing externalizing behavior in youth and effectively targets factors contributing to various behavior noted to cause youth maladjustment. Often factors that are prioritize in treatment include the family system and the parental subsystem where problems of the individual parent can exist. The mechanism of change is found in the parent's change of their parenting practices and the reduction of problematic behavior (Hennenberger et al., 2013). Even though parental stress can interfere with parental responsibilities, it is not an uncommon experience. Parental stressors can be found in the form of mental health problems, marital distress, substance use (Porreca et al., 2017), parent-child relationship quality (Giannotta & Rydell, 2016) and other challenges that impact family functioning (Renzaho et al., 2013) and increase the risk factors that promote adolescent externalizing behavior. Although there are studies on the role of parental stress and adolescent externalizing behavior, there are fewer studies in MST studying this relationship more extensively. Parental stress has not been viewed, under the context of the family functioning dimensions of family adaptability and family cohesion in adolescent externalizing behavior, for these family structural factors as mediators in the treatment process. In addition, MST treatment

responses can be influenced by the parents' cultural and ethnic background. Although, there have been some studies on the influence of cultural and ethnic factors in families (Caucasians, African Americans, and Latinos/Hispanics) showing treatment response differences (Ryan et al., 2013), the reason for the differential response is not fully understood. Ethnicity may moderate the degree to which parents respond to MST interventions more favorably from a background, in turn influencing changes in adaptability and cohesion. These family functioning factors need to be explored and further understood as there have been limited mediational studies on families with adolescents receiving treatment for externalizing behavior (Deković et al., 2012). There is also a lack of information regarding the specificity of mediational effects for different family functioning dimensions (Deković et al., 2012).

Purpose of the Study

The purpose of this study is to: (a) determine if parental stress is associated with adolescent externalizing behavior, (b) examine if ethnicity is a moderator in this relationship, (c) determine to what extent the family functioning (family adaptability and family cohesiveness) plays a mediating role in this relationship, and (d) determine if there is any difference between ethnic groups of family functioning reports. Quantitative data will be used to examine the relationship between parental stress and adolescent externalizing behavior and the family functioning dimensions of family adaptability and family cohesiveness.

Research Questions

In this study, the relationship between parental stress and adolescent externalizing behavior treatment outcomes was reviewed. Specifically, the researcher examined the relationship between parental stress using the Parenting Stress Index (PSI; Abidin, 1995) and the Barriers to Treatment Participation Scale (BPTS; Kazdin et al., 1995) and adolescent

externalizing behavior using the Child Behavior Checklist (CBCL; Achenbach, 1991). The mediation for family functioning was measured using the Family Adaptability and Cohesion Scale – III (FACES-III; Olson et al., 1985). The present study will attempt to answer the following questions:

1. Do significant correlations exist between parental stress as measured by the Stress Index for Parents of Adolescents (Sheras et al., 1998) and the Barriers to Treatment Participation Scale (Kazdin et al., 1995) and adolescent externalizing behavior as measured by the Child Behavior Checklist (Achenbach, 1991) among families participating in Multisystemic therapy?
2. Does ethnicity function as a moderator between parental stress and adolescent externalizing behavior?
3. Does family functioning (family adaptability and family cohesiveness) as measured by the Family Adaptability and Cohesion Evaluation Scale – III (Olson et al., 1985) mediate the relationship between parental stress and adolescent externalizing behavior?
4. Is there any difference between ethnic groups of family pretest and posttest reporting of family functioning (family adaptability and family cohesion)?

Limitations and Delimitations

The present study possessed inherent strengths and weaknesses. The sample population was recruited from the metropolitan city of Denver and from the Western state of Colorado, which may not reflect all ethnic compositions nor the type of region of a family's dwelling in the United States. The participants were all treated with Multisystemic therapy, therefore there was no comparison group available. The parent and youth completed measures that relied on self-report and could have been influenced by social desirability. The gathered data was also

secondary analysis and the information was obtained in 2001 from the parent study. One of the measures used in the study made available an updated version for the assessment. In addition, there were other assessments that were available to measure parental stress, adolescent externalizing behavior and family functioning, however it was assumed that the selected measures accurately captured the construct intended to be reviewed in this study.

Definitions

The following is a list of operational definitions for the relevant terms used in this research study.

Adolescent Externalizing Behavior

The definition of adolescent externalizing behavior used in this study is taken from Reef and colleagues and described as “four types: aggression (e.g., fights, bullies), oppositionality (e.g., temper, stubborn), property violations (e.g., lies, cruel to animals), and status violations (e.g., substance use, runaway)” (Reef et al., 2011, p. 1233).

Caregiver Strain

For the purposes of this study, the definition of caregiver strain that will be used “refers to the additional demands placed upon caregivers related to the day-to-day care of their children with emotional and behavioral disorders and the impact of these demands on families” (Green et al., 2020, p. 761).

Ethnic Minority

This is defined as a “non-European American” (Pina et al., 2019 p. 179).

Family Adaptability (Flexibility)

Family adaptability is defined as “the amount of change in its leadership, role relationships, and relationship rules” (Olson et al., 2019, p. 202).

Family Cohesion

The definition of family cohesion is defined as “the emotional bonding that couple and family members have toward one another” (Olson et al., 2019, p.201).

Family Functioning

In this study, the definition of family functioning is “a family and its members’ ability to have a balance in adaptability, cohesion and communication” (Olson, 2000, p.144).

Multisystemic Therapy

Multisystemic Therapy is an intensive family- and home-based intervention for young people with serious antisocial behavior influenced by research on the multidetermined nature of youth antisocial behavior, it uses a social ecological approach (Bronfenbrenner, 1979) and aims to improve the young person’s behavior and to prevent reoffending by affecting the multiple systems that surround the young person. (Tighe et al., 2012, p.187)

Parental Stress

This is defined as:

The stress from parenting that is a highly complex one that often must be performed within very demanding situations, with limited personal and physical resources, and in relation to a child who by virtue of some mental or physical attribute may be exceedingly difficult to parent ... parent-child interactions and child outcomes occur as a function of the complex interplay among, parent, child and situation. Each of these three domains represents several variables and systems that increase or decrease in importance in relation to the resultant parenting stress in any given parent-child dyad (Abidin, 1990, p. 298).

Significance of the Study

Parents are widely recognized as the change agents in the treatment interventions for childhood and adolescent behavior problems. Parents of adolescents with externalizing behavior can experience heightened levels of parental stress due to the various challenges of parenting along with other life stressors. Parental stress that remains unmanaged and rises to high levels of stress can significantly impact treatment for adolescent externalizing behavior. Multisystemic therapy is a research proven family treatment for this population. Multisystemic therapy focuses on the relationships and interactions the youth has within his/her family, peers, school, and community (Zajac et al., 2015). It also views the parent as a change agent that can improve the relationship between the parent-child dyad by addressing the clinical needs and leveraging of strengths. Parents are a critical in propelling treatment advances. Therefore, time and consideration to the parent's state of readiness for change and availability to implement interventions must be considered.

Parents of youth with externalizing behavior are often exasperated and have depleted energy levels. Stress often is the byproduct of enduring continuous negative social conditions. Parental stress derives from parenting responsibilities and the sense of ineffectiveness and inability to find solutions that bring change to aversive conditions. It is apparent from the literature that parental stress impacts the family, including the adolescent, and colors the family climate. The main body of literature on Multisystemic therapy has viewed adolescent stressors but has not studied the impact of parental stress on adolescent externalizing behavior. Furthermore, the mediating role of family adaptability and cohesiveness has not been explored on majority or ethnically diverse families. Since there has not been research examining the role of parental stress and MST youth with adolescent externalizing behavior, this study explores the relationship between these constructs.

The researcher is optimistic that this study contributes to researchers, educators, supervisors, and therapists working with this clinical issue. The research may help to better understand the family therapy processes that both inhibit or contribute to treatment outcomes and the type of parental stressors that MST parents typically experience prior and during the course of treatment, which can better inform the case conceptualization and guide the formation of an individualized treatment. The increased focus on parental stressors can further provide the individual skills necessary to drive better treatment outcomes, short and long-term, for adolescents. The enhanced parental skill repertoire can also extend into the youth's domain and they may also learn how to prevent or manage their own child's behavior as it may also manifest one day when they are parents. The study of ethnically diverse families in MST also provides the cultural lens of the growing reality of the diversity found in the United States and the need for clinicians to consider the role of ethnicity in family presentations.

Theoretical and Conceptual Framework

There are three theoretical frameworks that guide the design of this study: Brannan and colleagues' (2003) Modified Double ABCX Model, Olsen's (2000) Circumplex Model of Marital and Family Systems, and Henggeler and colleagues' (2009) MST Theory of Change.

Modified Double ABCX Model

In 2001, Brannan and Heflinger developed the Modified Double ABCX as a framework for understanding caregiver strain (parental stress) and its relationship to psychological distress. There are relationships involving caregiver strain (parental stress), stressors (parenting stress, life stressors, and adolescent externalizing behaviors), resources, and perceptions. The model was an adaptation to McCubbin and Patterson's 1983 model of family adjustment and adaptation. This model examined the families stress and coping with an adolescent's mental health problems.

Essentially, the caregiver strain is understood as a crisis experience due to the stressor events from the family and their ability to process it. Often, this becomes a cycle of stress and coping that is repeated over time (Brannan & Heflinger, 2000). The family demands can increase and the family's resources can either increase or decrease over time, but the family can adapt or maladapt to the situation, which all depends on the caregiver's response to this event (Brannan & Heflinger, 2000).

The Circumplex Model of Family Functioning

The Circumplex Model states that balanced types of couples and families will generally function more adequately than unbalanced types (Olson, 2000). This is a relational framework with three dimensions: flexibility (adaptability), cohesion, and communication (Olson, 2011). Balanced flexibility indicates a level of stability in the family and the ability to change as needed as a response to new situations. Balanced cohesion in a family permits their members to experience independence and connectedness to their family. Communication is a facilitating dimension that helps families alter their levels of cohesion and flexibility. A family functioning without balance will stay focused on the negative extremes of certain life events and stressful moments. The model has been found to be sensitive to ethnic and cultural diversity; however, it is critical that ethnic group norms, that are normative expectations, are supported in dimension observations (Olson, 2000).

MST Theory of Change

The MST Theory of Change aims to reduce youthful antisocial behavior (adolescent externalizing behavior) by targeting risk factors that are most strongly connected to problematic behaviors (Henggeler, 2012). The family is considered the most important link in the treatment process. The MST therapist working with the family seeks to increase the parent's (change

agent's) skills around strategies of control, supervision, and relationships (Henggeler, 2012). The parent's skills are used to improve the family functioning, which supports the needed change.

Chapter Summary

This chapter provides a rationale for the study in the relationship between parental stress and adolescent externalizing behavior, the mediating role of the family functioning, and the dimensions of family flexibility on ethnically diverse families in MST treatment. A brief background of the body of literature is reviewed and the relationships between the variables are established. The literature review formulated the growing concern around parental stress contributing to the development and maintenance of adolescent externalizing behavior and the concern of being a barrier to treatment participation. Family functioning plays a significant role in mediation of the relationship between parental stress and adolescent externalizing behavior. The conducted research set out to answer this question has limitations, which were briefly outlined in this chapter will be further expanded in Chapter Five.

Chapter II: Literature Review

The purpose of this study was to investigate the relationship between parental stress and adolescent externalizing behavior and the mediating relationship of the family functioning dimensions of adaptability and cohesion in ethnically diverse families receiving Multisystemic therapy. Parental stress seems to result from both intrapersonal and external stressor experiences. The inability to manage parental stress appears to contribute to the development and maintenance of adolescent externalizing behavior and consequences to the family. The family system provides protective and risk factors that further impacts the adolescent and the parent. Understanding the role, the family plays in the parental stress experience across different ethnicities is an important aspect of this study.

This chapter will provide an overview of the key components of parental stress: the constructs, dimensions, and associated outcomes. After the review of the literature on parental stress, the chapter will focus on the relationship between parental stress and adolescent externalizing behavior, and the mediators of family adaptability and family cohesiveness. In continuation, a discussion will highlight the moderating role of ethnicity on these family dimensions.

Parental Stress

Family and children researchers recognize parental stress as problematic, with influence potential that extends beyond the parent and reaches the child, family, and community. Parental adjustment problems in the form of stress are experienced by the other family members through parenting responses in the relationship interactions. Parental stress is an important overarching construct that at certain levels can promote both healthy and unhealthy outcomes. There are several forms of parental stress that include parenting stress and life stressors. A couple of these

will be reviewed. The first is the inability to manage interpersonal issues around the parent-child relationship and parent-parent dyad that can lead to parenting stress. The second is environment-related challenges that persist as life stressors (McQuillan et al., 2019).

The relationship between parental stress (parenting stress and life stressors) and youth adjustment problems elevate the relevancy of expanding on the current literature in pursuit of adding to the knowledge base of how these variables interact in the development and maintenance of childhood problem behavior. The childhood problem behavior can continue in the form of adolescent externalizing behavior. The parental role is highly influential in adolescent development. Acknowledgment and validation of parental stress as part of the natural occurring parental experience is helpful in the understanding the full parental context. High levels of parental stress can disrupt and impair parenting abilities contributing to adolescent externalizing behavior. If treatment is needed for the adolescent behavior problems, high levels of parental stress can pose a risk towards treatment participation and effectiveness (Piotrowska et al., 2017). It becomes important to examine the dynamic longitudinal interactions occurring more closely with families to better understand the impact of parental stress and adolescent behavioral outcomes (Crandall et al., 2016).

Parental Stress Defined

In 1976, Abidin explained that parenting stress was caused by the interaction of characteristics from a parent (e.g., depression, health) and a difficult child (e.g., demandingness, impulsivity, hyperactivity) and parent, which contributed to the overall experience filled with high levels of expectations and pressures in the parenting role. Caregiver strain can be both objective and subjective. Objective strain can come in the form of observable negative life occurrences such as financial hardship, job loss, and lower spent time with other family members

and friends (Accurso et al., 2015). Subjective strain refers to negative emotions that are either internalized with worry, guilt, and sadness or externalized with expressions of anger, resentment, and embarrassment (Accurso et al., 2015). Parenting stress is considered a common component of the parenting experience and progresses into pervasive when parents persist in the elevated levels of struggle with parental responsibilities (Meier et al., 2018). Parents who continue to experience ongoing high levels of parenting stress may also be less available to implement effective treatment interventions for their children (Kazdin, 1995).

Treatment effectiveness may be compromised while the parent experiences high levels of parental stress (Piotrowska et al., 2017). When parents are overwhelmed and unable to manage the stress, there is often a negative impact towards scheduling sessions and attendance. Furthermore, treatment investment diminishes due to the limited cognitive resources for parents that assist them in fully participating in the intervention (Piotrowska et al., 2017). Concurrently, interventions that address youth problem behaviors can be most effective when they fully address not only the adolescent's need but also that of their parent (Green et al., 2020). The absence of a parental focus for assessing intervention readiness, can allow the levels of parental stress to progress to parent exasperation and risks the parents' ability to fully engage in treatment for their youth. Parents who have surpassed their threshold are more likely to report struggling with patience and persistence and have an increased likelihood of having adolescents that are engaged in greater delinquency (Meldrum et al., 2017). Parental stress can place the parent at risk for the development or progression of other challenges such as partner problems, child abuse and neglect, financial burden, mental health, substance use, and health conditions (Håkansson et al., 2019; Hefti et al., 2020; Ponnet et al., 2016; Solhom et al., 2019; Tsiouli et al., 2014).

Dimensions of Parental Stress

Parenting Stress. Research has determined significant relationships between parenting stress and various parent, youth, and family outcomes, including parental mental health and substance use (Porreca et al., 2017), adolescent emotional and behavioral issues (Barroso et al., 2017), adolescent academic achievement (Masud et al., 2015), parenting monitoring and discipline practices (Yoo, 2017), parent–child relationship quality (Giannotta & Rydell, 2016) and family functioning (Renzaho et al., 2013). Current parenting has become more intensive than decades ago and parents spend more time with their children due to an increase in the time spent in activities versus the routine care of children (Sayer et al., 2004). A study by Solhom and colleagues (2019) examined the mothers’ perception of wellbeing and distress and, for the most part, there were influences other than perceived change in child behavior problems. This outcome adds strength to the power of parenting stress on the outcomes of parent, youth, and family; even when an adolescent improves their challenging behavior, it still does not account for all the variance of improved perceptions of mothers’ wellbeing and distress (Solhom et al., 2019).

Life Stressors. Östberg and Hagekull (2013) discussed the role of life stressors as a distinct form of parenting stress. According to McQuillan and colleagues (2019), external stressors are commonly seen as child and parent health problems, a lack of social support, negative life events, and daily hassles. These stressors cause impairment and negatively impact family functioning. External stressors that are also identified as demographic variables, such as educational level, being a single parent, minority ethnic background, and lower socioeconomic status, warrant our attention (Östberg & Hagekull, 2013).

Doom and colleagues (2016) described life stressors in the constructs of harshness and unpredictability. Harshness is the rate for morbidity and mortality across all ages within a population due to environmental factors related to occupational status, income, and maternal education (Doom et al., 2016). Unpredictability is the variability in harshness across time and space, such as the mothers' life stress in three areas: changes in employment, changes in residence, and changes in cohabitation (Doom et al., 2016; Ellis et al., 2009). The caregiver's concern of the life stressors is reflected and expressed in the parenting stress experience. It is important to gather information about life stressors in order to fully comprehend the parent context in relation to their child's behavior and family functioning (Östberg & Hagekull, 2013). For ethnic minority parents, the stress can also exist in the form of acculturation stress (Lorenzo et al., 2016).

Furthermore, some of the literature highlighted the strength of an individual's commitment towards ethnic or racial identity and this can indirectly influence their sense of well-being by functioning as a protective barrier against the negative impact of experiences of discrimination of Latino and African-American adults and adolescents (Hurwich-Reiss et al., 2015; Torres et al., 2011). Therefore, forms of stress, like acculturation stress and ethnic identity, should be consider as a possible strength while gathering information on parental stressors.

Parental Stress and Childhood Maladjustment Problems

Parents of adolescents with clinically significant mental, emotional, and behavioral health issues may warrant increasing attention in their parental stress. There is a bidirectional relationship between parenting stress and daily hassles including child adjustment issues (McQuillan et al., 2019). Parents also play the role of teachers to children's socialization and development; therefore, there is a risk of modeling inapt ways of managing social-relational

situations (Wilke et al., 2018). Parents with higher levels of parenting stress are more likely to respond in ways that maintain or intensify child problem behaviors (Green et al., 2020).

Ethnicity Commentary. Studies have linked caregiver race and ethnicity to parental stress where culture influences the perceptions of parental stress (Mayberry & Heflin, 2013). Race and ethnicity have been linked to higher rates of parenting stress and these increased rates have been found among ethnic minority parents (Barroso et al., 2017). It is hypothesized that ethnic minority families have so many other stressors, which include economic struggles that reduces their ability to tolerate child misbehavior and ultimately increases their levels of parenting stress. Currently, moderation analyses have found a larger effect in majority samples where the relationship has been established between parenting stress and child externalizing and internalizing behavior (Barroso et al., 2017). There appears to be a smaller effect size for Latino parents potentially due to cultural differences where mental health problems, such as psychosocial issues, parenting stress, and child behavior problems, carry a stigma and can lead to underreporting (Villatoro et al., 2014). On the opposite end “familismo,” a cultural value can behave as a protective factor against parenting stress where Latino mothers are keen to showing family loyalty, reciprocity, and solidarity (Barroso et al., 2017).

Another study examined the parents of Emotionally Disturbed (ED) children in the education setting. Green and colleagues (2020) found that the caregivers of African Americans displayed a trend of having lower caregiver strain, fewer resources, and more negative perceptions about services. This finding was despite African American students more often being identified as being ED compared to other ethnic/racial groups (Wagner et al., 2005). These findings suggest that additional studies are needed to capture the potential impact of race/ethnicity more fully on caregiver strain in the ED population (Green et al., 2020).

The Family Stress Model (FSM; Congor et al., 2002) highlighted the impact of parental stressors and the influence it has on the adjustment of adolescent mental health and use of substances. According to the family stress model, low socioeconomic status (SES) predicted less than desirable parenting through family stress. Some ethnic minority families come from lower SES backgrounds as compared to majority families and can experience acculturative stress associated with their minority status (Emeen et al., 2013). This can negatively affect the parenting quality and impact the relationships between parent and child. The study was designed to examine the role of SES and other stressors such as daily hassles, psychological distress, and acculturative stress and positive parenting. The findings established the relationship between SES and positive parenting, as this relationship was partly mediated by parental psychological stress and acculturative stress. Less positive parenting was found for Turkish Dutch families with lower SES as this related to more psychological distress and more acculturative stress (Emeen et al., 2013).

Parental Stress and Adolescent Externalizing Behavior

Adolescence is a difficult developmental period for parents to navigate. Parents of youth with externalizing behavior may experience greater parenting demands and responsibilities as compared to parents of youth without these behavioral issues (Mendenhall & Mount, 2011). Studies on parents with youth with clinically significant mental, emotional, and behavioral health issues, such as attention-deficit/hyperactivity disorder, oppositional defiant disorder, and conduct disorder report higher levels of parenting stress than parents of youth without clinical issues (Brown et al., 2018). According to Meier and colleagues (2018), both mothers and fathers report the lowest levels of happiness in activities with adolescents as compared to earlier child age. These studies highlight the challenges that are to be expected during the rearing of an adolescent and more specifically for youth with externalizing behavior.

Parental Stress and Family Functioning

Parental stress impacts the parent's ability to respond in adaptive ways to situations that develop in the family. When a parent reaches the level of parental burnout, there are negative outcomes that can be observed in three dimensions: emotional distancing to one's child, a sense of being ineffective in the parental role, and overwhelming exhaustion (Mikolajczak et al., 2018). Mikolajczak and colleagues (2018) evaluated a sample of 1,723 French-speaking parents who had at least one child living at home. Parental burnout was measured through the administration of the Parental Burnout Inventory (PBI; Roskam et al., 2017). This measure was a 22-item self-report questionnaire with three subscales for Emotional Exhaustion, Emotional Distancing, and Loss of Personal Accomplishment. The stable traits of the parent of attachment, trait emotional intelligence, and the big five personality traits were measured through the Experiences in Close Relationships Questionnaire Revised (ECR-R; Fraley et al., 2000) with two subscales for Anxiety and Avoidance. The parental factors self-efficacy beliefs and the perceived role restriction were measured through the Parental Stress Questionnaire (PSQ; Verhulst et al., 2011) and the child rearing practices were measured through the Evaluation des Pratiques Educatives Parentales (EPEP; Meunier & Roskam, 2007). Family functioning factors of marital satisfaction, co-parenting and family disorganization was measured with the Evaluation and Nurturing Relationship Issues, Communication and Happiness (ENRICH; Fowers & Olson, 1993) scale, Co-parenting Scale (CPS; Feinberg et al., 2012), and the Confusion Hubbub and Order Scale (CHAOS; Matheny et al., 1995). Findings demonstrated that increased risk for parental burnout could be found in parent characteristics, parenting practices, and family functioning (conflict, inter-parental disagreement, poor partner satisfaction, and family

disorganization) (Mikolajczak et al., 2018). Ultimately, the presence of challenges in these factors increase the risk of parental burnout.

Ethnicity Commentary. A study by Lorenzo-Blanco and colleagues (2016) examined the trajectory of a latent parent acculturative stress factor and its influence on youth outcomes through parent and youth reported family functioning. Data was collected through a school-based survey on 302 recent (5 years) immigrant Latino parents. Parent acculturative stress predicted worse youth-reported family functioning; earlier levels of parent acculturative stress predicted worse parent-reported family functioning (Lorenzo-Blanco et al., 2016). There were positive outcomes with youth-reported positive family functioning, which predicted higher self-esteem, lower symptoms of depression, and lower externalizing behavior such as aggression and rule-breaking behavior (Lorenzo-Blanco et al., 2016). When parents reported positive family functioning, this predicted lower youth alcohol and cigarette use (Lorenzo-Blanco et al., 2016). Findings highlight the need for Latino youth preventive interventions to target parent acculturative stress and family functioning when warranted.

Parental Stress Treatments

Most treatments do not specifically aim at decreasing parental stress but do so by helping the parent address the child's problem behavior. The study conducted by Accurso and colleagues (2015), examined families receiving treatment at six publicly funded outpatient mental health care facility clinics; families were ethnically and diagnostically diverse and so were the children. The study's findings suggest that aiming to improve child symptoms and decreasing caregiver strain in treatment is equally important (Accurso et al., 2015). Psychoeducation and supportive services are effective in reducing caregiver strain and positively impacting the emotional functioning of their children (Kutash et al., 2013). Peer support also supported the reduction of caregivers reporting high levels of caregiver strain and increased treatment efficacy (Kutash et

al., 2011). Therapists might intervene directly to reduce caregiver strain through a variety of techniques, including teaching skills, reframing child problems, increasing caregiver social support, and providing families with additional resources, support, and empathy (Accurso et al., 2015), including parent training. Research suggests that complementary treatment components may be beneficial particularly for caregivers with initial high reports of strain (Kutash et al., 2013).

Failure to intervene on chronic parenting stress can lead to parental burnout. Heightened levels of parental stress progressed into parental burnout places the treatment process at risk of clinical advances, as the parent no longer has the necessary individual resources to cope with stressors, show up to sessions, and put into practice the interventions that are designed in collaboration with the therapist (Mikolajczak et al., 2018).

The study by Rostad and colleagues (2017) reviewed families with situations of child maltreatment or were at risk for child maltreatment who were referred to parenting interventions. Treatment attendance and response to the parenting programs was met with difficulty due to the various stressors that interfere with participation for at-risk families. Findings showed that parenting stress is an important predictor of program completion and that increased parenting stress without other stressors and constructs may support program participation. This may suggest that some parental stress can be in fact helpful and increases the motivation to participate in parenting interventions when it is the only experience a parent has (Rostad et al., 2017). Previous research examining parenting stress associated with parents' perceptions of barriers may interfere with treatment participation. It is beneficial for initial treatment focus to be placed on addressing initial parental levels of stress and address perceptions of barriers such as loss of hope, partner/family barriers, practical barriers and competing priorities anticipated to interfere with intervention participation (Rostad et al., 2017).

Multisystemic therapy (MST), a family-based treatment for youth with antisocial behavior, can directly address a caregivers' emotional and/or mental health distress as these are considered anticipate barriers towards effective parenting. MST therapists would collaborate with parents to develop and implement interventions to manage their high level of stress, which compromise more effective parenting practices like monitoring and supervision (Tolou-Shams et al., 2018).

Adolescent Externalizing Behavior

Adolescent Externalizing Behavior Defined

The Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5; APA, 2013) classified externalizing behavior in several types of disorders: attention-deficit/hyperactivity disorder, oppositional defiant disorder, conduct disorder, antisocial personality disorder, pyromania, kleptomania, intermittent explosive disorder. and substance use disorders. Criteria for externalizing behavior is met when there is a functional impairment in at least one domain of either academic, occupational, social relationships, or family functioning. Typically, adolescents are diagnosed with conduct disorder (CD) or oppositional defiant disorder (ODD). Criteria for ODD includes when adolescents display angry or irritable moods, display defiant behavior (i.e., arguing with authority figures), defy rules, blames others for misbehavior, annoy others, and show vindictiveness at least twice within a six-month time period. CD criteria finds that there is aggressive behavior toward people and animals, property destruction, lying, theft, and violations of normally accepted rules of conduct. There is generally negative functioning socially or at work or school.

Outcomes of Adolescent Externalizing Behavior. Reef and his colleagues (2011) completed a meta-analysis of 44 published studies defining externalizing behavior into four categories of opposition, aggression, status violations, and property violations. Researchers

followed the participants over a 24-year time span and found that all four categories externalizing behavior in childhood showed disruptive behavior problems in adulthood (Reef et al., 2011). Findings demonstrated that the opposition type of children had a higher likelihood of showing anxiety disorder in adulthood. Status violation types, such as those showing runaway, truancy, and drug and alcohol use, continued into adult substance use, anxiety, and mood disorder. Ultimately, the children with high-level externalizing behavior trajectories had the greatest likelihood to have adult internalizing and externalizing disorders in adulthood. The risks involved child and adolescent externalizing behavior can have a detrimental impact on the individual, family, and society.

Ethnicity Commentary. In the United States, ethnic minorities, including African American adolescents, are exposed to community, school, and family stressors and prejudices (Boardman & Alexander, 2011). African American youth are often overrepresented in the school and juvenile justice system and demonstrations of disruptive behavioral issues can be reflective of mental health unmet needs that lead to juvenile justice involvement (Langrehr, 2011). Latino adolescents and adolescents from immigrant families continue to be an at-risk population for increasing externalizing behavior (Pereyra & Bean, 2017). A study by Martinez and Polo (2018) was carried out across three metropolitan cities of Los Angeles (530 youth), Boston (360 youth), and Chicago (133) and they examined adolescents in sixth and seventh grade. The adolescents were provided the Affiliative Obedience scale (Díaz-Guerrero, 1994), which measured the endorsed values of respect and deference towards adults, particularly to parents. It was found that affiliative obedience was associated with decreased risk for externalizing problems across neighborhood socioeconomic and sociocultural contexts. There were also other favorable conditions for lower externalizing behavior, such as higher socioeconomic status neighborhoods,

higher affiliative obedience, and higher concentrations of Latinos and immigrants (Martinez & Polo, 2018).

Adolescent Externalizing Behavior Treatment

Parent Training Programs. Parenting training programs have a robust literature with efficacy studies on child and adolescent psychosocial interventions and has reviewed treatment fidelity strategies across time. Most children that receive treatment in the community mental health settings are diagnosed with externalizing behavior marking a great need for the dissemination of effective treatments for this problem (Garbacz et al., 2014). The most current treatments for youth externalizing behavior include family therapies that place a primary clinical focus on parents. Research has highlighted several effective treatment approaches that have demonstrated improvement with adolescent externalizing behavior, such as Functional Family Therapy (FFT; Baglivio et al., 2014), Multidimensional Family Therapy (MDFT; Pol et al., 2017), and also Multisystemic Therapy (MST; McCart & Sheidow, 2016).

Multisystemic Therapy. Multisystemic Therapy is a specialized family treatment program for adolescents with externalizing behavior problems. It has been validated by numerous research studies as well as youth development private and government organizations. Blueprints for Healthy Youth Development is an organization that identifies interventions that work for young people through rigorous processes that develop a comprehensive registry for evidence-based intervention programs that are effective in reducing antisocial behavior and promoting a healthy course of youth development and adult maturity. The Prevention Services Clearinghouse reviews research evidence on programs designed to improve services to children and families and prevent foster care placements under the Family First Prevention Services Act

(FFPSA) for the United States Department of Health and Human Services. MST treatment was highly rated for the areas of substance abuse and mental health services (Mihalic et al., 2015) .

Multisystemic therapy has been shown to be an effective treatment for youth with serious externalizing behavior. Understanding the families and youth response to treatment and the predictors of externalizing behavior offers a clearer understanding of the need to individualize treatment approaches and the different trajectories of change in MST while considering family strengths (Mertens et al., 2017). MST views the caregiver as influencers of the family climate and emphasizes the parental role in carrying out the interventions in the home, schools, and community. The Day and Dotterer (2018) study found that parental involvement impacted adolescent academic outcomes when they used the intervention format of having a parent group component with consideration to ethnicity in a population of boys. The samples with higher representations of minority youth had greater effect on sizes versus samples with low representations of minority youth had smaller effect sizes suggesting that family involvement is important for ethnic families (Day & Dotterer, 2018).

In 2014, Stouwe and colleagues (2014) conducted a multi-level meta-analysis of 22 studies with 332 effect sizes that included some studies that were both non-published and non-randomized and more recent to review the effectiveness of Multisystemic therapy. Findings demonstrated effective sizes that were small but significant for delinquency, psychopathology, substance use, family factors, out-of-home placement, and peer factors. Significant effects were found in studies with juveniles that had an average age under 15 years old. $d = .421$ and were Caucasian youth. Although MST has been used with diverse families and transported to other countries, the findings support the continued need to culturally tailoring the treatment process for minority ethnic youth. Studies in the United States had stronger effect sizes for delinquency, $d =$

.275, and for externalizing behavior, $d = .286$ (Stowe et al., 2014). The transportability of MST has been established with first-generation and second-generation implementation waves of MST abroad, which focused on the use of their ongoing mechanism of program quality assurance and quality improvement that is at the core of MST implementation (Stowe et al., 2014). Lastly, an important finding was the indication of improved parenting skills and no improvement in family functioning on the outcome for delinquency. Families with improved family functioning did not significantly impact long-term recidivism. This meta-analysis did not view the impact of family functioning in relation to adolescent externalizing behavior nor view the family functioning specifically for minority youth.

Ethnicity Commentary. Consideration of the ethnicity of the families is necessary as the family demographics are changing in the United States and with adolescents accounting for 25% of Americans and the 2025 projection that racial-ethnic minorities will account for 52% of the youth population under age 18 (Office of Juvenile Justice and Delinquency Prevention, 2019). Over time, there have been more studies on ethnic minority youth. 65 studies were evaluated for the percent of enrolled ethnic minority youth in psychosocial, cognitive, and behavioral interventions for different issues such as anxiety, depression, disruptive substance use, trauma stress reaction, comorbid, self-injurious and suicidality (Pina et al., 2019). Huey and Jones (2013) found that there were more than 30 distinct treatments that were probably or possibly efficacious for ethnic minority children and adolescents. The current research studies only reviewed some of the total number of treatment outcome studies that focused on ethnic minorities psychosocial interventions in consideration of cultural tailoring (Huey et al., 2014).

MST has been shown to be generally effective and treatment effective sizes are found across cultural groups (Huey et al., 2014). The Pina and colleagues (2019) found MST to be a

level 1 well-established intervention for Latino and African American adolescents with disruptive behavior problems. The MST related studies for substance use found reductions in substance use and no moderation ethnicity effects (Henggeler et al, 1999; Henggeler et al., 2012). The MST studies for disruptive behaviors found that there were lower levels of delinquency and fewer arrests; there were also no ethnicity moderation effects (Borduin et al., 1995) Henggeler et al., 1992; Henggeler et al., 1997).

Family Functioning

Adaptive family functioning is characterized by high levels of family cohesion and family adaptability and serves as a protective factor in the development and maintenance of negative child outcomes, negative emotional reactivity (Rabinowitz et al., 2016), aggression (Finan et al., 2015, Henneberger et al., 2016), risky sex behaviors (Tolou-Shams et al., 2018), and rule-breaking behavior (Finan et al., 2015). Findings on family functioning studies highlight the relevance of family-centered interventions aimed at increasing family cohesion, family adaptability, and ways to effectively cope with the parenting demands of child health and behavior-related problems (Mendes et al., 2016). Family functioning is linked to child emotional and behavioral problems is also moderated by ethnicity (Henneberger et al., 2016). Ethnicity refers to different social groups that share a few factors in common, such as a shared history, sense of identity, geographical location, and cultural roots (Khodarahimi, 2011).

Family distress is a key predictor of family functioning and can derive from parental stress. In the Crowe & Lyness (2014) study, family distress was examined by using a single distress score and from the four family functioning scales that were used to measure this construct, three were significant. Distress was related to satisfaction, communication, cohesion, and flexibility (Crowe & Lyness, 2014).

Family Functioning Dimensions

Family functioning is a construct with multiple facets ranging from parent-child interactions, parenting practices, family climate, as well as structural and organization properties, such as cohesiveness, values, beliefs, and structure (Tolou-Shams et al., 2018). Family functioning is significantly influenced by the health and well-being of the adolescent through the parental system (Tolou-Shame et al., 2018).

Family Cohesion. Family cohesion describes relational interactions among family members with demonstrations of shared affection, support, commitment, and helpfulness (Rabinowitz et al., 2016). Families that have lower levels of cohesiveness tend to have and model ineffective communication; they are less able to support each other during times of distress and are particularly less effective in decreasing distress in their adolescent (Rabinowitz et al., 2016). Stronger levels of cohesion are beneficial for youth development of socially appropriate responses and the management of social tensions. Family cohesion helps adolescents with negative emotional reactivity learn how to better regulate their state of emotions and to develop more positive perceptions of others, decreasing their negative responses based on anger or fear when threats are perceived (Rabinowitz et al., 2016). Surprisingly, Henneberger and colleagues (2016) examined 364 inner city adolescent boys (54% African-American and 40% Hispanic) and it was inconsistent with other findings on family cohesion being a protective factor as a strong relationship was established between highly cohesive families and peer violence and delinquency. A possible explanation to this outcome was perhaps that parents with intentions to protect their child via family cohesiveness, left their adolescent without the critical refusal skills needed to avoid the influence of violent peers (Henneberger et al., 2013).

Family Adaptability. Family adaptability is defined as the family's ability to make modifications to the structure of the power domain, relationship roles, and the rules in the relationship roles as it relates to developmental stress (Javadian, 2011). Low family adaptability during the important developmental period of adolescence has led to adolescent behavior problems due to the higher demands for attention and the parents not being able to adequately meet this need generally as a result of parental frustration (Joh et al., 2013). It appears that low family adaptability and cohesion increase the internal challenges among adolescents (Joh et al., 2013). When there are increased levels of family flexibility, families can reframe mental illness or distress in a more positive light and, therefore, can facilitate better communication despite difficult circumstances (Crowe & Lyness, 2014).

The Mediating Role of Family Functioning

Several studies have examined family functioning and the relationship to parental characteristics (i.e., maternal depression and parental substance use) and parenting practices (i.e., monitoring and discipline) and adolescent externalizing behavior. The extant literature demonstrates variations in their findings of family functioning as a mediator of adolescent externalizing behavior. Researchers investigated the mediating role of family functioning in the relationship of parental problem drinking and adolescent externalizing behavior over time (Finan et al., 2015). Seven public high schools with adolescents participated in the study by completing surveys administered by trained research staff onsite; parental surveys were collected via mail (Finan et al., 2015). Family functioning was measured with the cohesion subscale in the Family Satisfaction Scale (FSS; Needham, 2008), which gathered the youth's satisfaction with the level of closeness to their family (Finan et al., 2015). Findings demonstrated indirect paths for maternal and paternal problems drinking negatively predicting family cohesion and an indirect

path for parental problem drinking and later adolescent externalizing behavior (Finan et al., 2015). For both girl and boys, family cohesion mediated the relationship between paternal problem drinking and aggression and rule breaking behavior in boys (Finan et al., 2015).

Family Functioning and Parental Stress. Family functioning was found to be a mechanism through which maternal emotion regulation influenced parenting and child behaviors (Crandall et al., 2016). Parental stress led to maternal emotion dysregulation at which some mothers responded with maternal distancing or maternal emotional reactivity (Crandall et al., 2016). Family functioning processes were less effective by maternal emotional distancing in two ways. The first was due to mothers avoiding distress resulting in missed opportunities to help their child in potentially confrontational situations and helping them to face challenging situations and problem-solve (Crandall et al., 2016). The second came as a response to the emotional distancing by the family members as this interfered with individual members' sense of family participation (Skowron et al., 2009). In this study, maternal emotional distancing was a stronger predictor of family functioning, parenting, and adolescent behaviors than emotional reactivity. Parental stress resulting in maternal emotional distancing could potentially be more harmful to family functioning and adolescent behaviors than reactive maternal emotional outbursts (Crandall et al., 2016).

Family Functioning and Adolescent Externalizing Behavior. Đurišić (2018) established a link between family functioning (climate) and youth externalizing behavior problems. In this study, a sample of 135 students with externalizing behavior between the ages of 11 to 14 years old participated in completing evaluations with the Achenbach System of Empirically Based Assessment Youth Self-Report (ASEBA YSR; Achenbach & Rescoria, 2001). Family functioning was measured through the Family Adaptability and Cohesion Scale –

IV (FACES-IV; Olson 2009) to further examine the family relationship quality. Findings showed that youth with externalizing behavior lived with families with problematic functioning (Đurišić, 2018). Families with low quality family relationships had poor adaptability and connectivity and poor communication and dissatisfaction (Đurišić, 2018).

Family Functioning and Ethnicity. The family is the corner stone of life span development. Ethnicity, through the infusion of cultural values, beliefs, and attitudes, influences the family unit. Family functioning is reflected in each family member and ethnicity influences relationships and interactions between members and outside of the home (Huey et al., 2014). Ethnicity and cultural integration are a critical component in current psychosocial treatments (Huey et al., 2014). Studies highlight family values that can be leveraged as strengths as part of the family functioning . For example, Lorenzo-Blanco (2017) completed a longitudinal study on Hispanic parents and found a relationship between the parent's cultural stress and depressive symptoms and predicted parent's reporting of lower family functioning. The adolescent was also reporting lower levels of family functioning because of parental cultural stress (Lorenzo-Blanco, 2017). Essentially the findings highlighted that parent symptomology of depression and family function were important mediators in the relationship of parent cultural stress and adolescent behavior problems (Lorenzo-Blanco, 2017). In Latino families, *familismo* is a strong emphasis on family and has varying levels of impact on family functioning, which can be observed in the dimension of family cohesion (Calzada et al., 2014). In a study of immigrant families with young children, mothers reported acculturation stress and their child's internalizing and externalizing behavior problems (Calzada et al., 2014). Findings suggested that maternal *familismo* can have a positive or negative impact on early developmental outcomes (Calzada et al., 2014). *Familismo* was found to have a positive association for boys and a negative association with

economically disadvantaged with adaptive behavior in a Mexican American sample (Calzada et al., 2014).

In another study by Washington and colleagues (2015), family interconnectedness through collectivism, parental support, and religiosity were examined in African American families. Interconnectedness in the family reflected factors that historically enabled African Americans to endure difficulties and remain in overall good behavioral health. Another study found that family interconnectedness (parental support and family support) was linked to children with a decreased likelihood to engage in risk behaviors and are more likely have adaptive behaviors (Washington et al., 2013).

Family Functioning in Multisystemic Therapy. Huey and colleagues (2000) identified two key mediators that impact MST treatment of family functioning and negative peer associations. Findings supported the association between therapist model adherence to improved family functioning and reductions in delinquent peer affiliations, which resulted in reduced antisocial behavior (Huey et al., 2000). Several studies have found the importance of family-focused interventions for delinquency prevention (Henneberger et al., 2013). Improving family functioning is a focus of Multisystemic therapy. The MST Theory of Change leads to reductions of severe conduct problems in adolescents (Weiss et al., 2015). Several studies have established parental stress as a strong predictor of childhood maladjustment and adolescent externalizing behavior (Östberg & Hagekull, 2013). Lowering parental stress can lead to improvements in the adolescent's problem behavior. Parental stress seems particularly relevant to study in the context of MST as an important focus to increase treatment intervention effectiveness as they are carried out by parents. The goal of the current study is to examine whether the relationship between parental stress and reductions in adolescent externalizing behavior would be mediated, at least in

part, by increased family functioning in the dimensions of adaptability and cohesion. A mediational study on families with adolescents can help identify the processes for behavior change observed in treatment outcomes (Dekovic et al., 2012). Positive family functioning through the familial relationships may support the family's use of MST interventions more completely. Improved family functioning in the form of parent-child relationships positively impact the youth's ability to receive requested changes by the parent and more readily accept the interventions to modify their behavior (Weiss et al., 2015).

In a qualitative study by Tighe and colleagues (2012), family accounts supported the MST theory of change (Huey et al., 2000) by sharing the positive impact on improved family relationships and parenting skills. Respondents also identified key components of the intervention that led to these improved parenting and relationship outcomes, such as implementing a behavior contract, learning how to manage conflict, and the therapist mediating different viewpoints. It was also found that for older youth, it became increasingly important that treatment supported working out the parent-child relationship and, in turn, the youth made some changes in their behavior (Tighe et al., 2012). These findings may be in line with Lundahl and colleagues (2006) and their review of parent training interventions, which placed a heavy focus on parents adhering to high levels of structure for behavioral management interventions and recommended that treatments for adolescent behavioral also consider placing a stronger emphasis on the quality of the parent-child relationships and the integration of values.

The implementation of MST into real world settings have shown that treatment is efficacious for adolescent externalizing behavior. Furthermore, it has also been effectively transported across ethnically diverse families. Although, there have been some studies on ethnicity as a moderator, studies have focused on the caregiver emotional bond with therapists and early treatment response. Additional commentary on the role of ethnicity can further

highlight the effect that it has on parental stress, externalizing behavior, and family functioning.

MST is an effective treatment for adolescent externalizing behavior all families with a supporting theory of change that focuses on family functioning to promote systemic positive change for the adolescent, parent, and family.

Chapter Summary

Parental stress has been associated with childhood maladjustment problems. Numerous studies have examined the relationship between parental stress and adolescent externalizing behavior (Brown et al., 2018; Meier et al., 2018; Mendenhall & Mount, 2011) and studies have also identified the mediating role of family functioning with adolescents and problematic behavior (Henneberger et al., 2016; Mikolajczak et al., 2018) . Multisystemic therapy, the family-based treatment identified for adolescent externalizing behavior, has numerous studies on treatment outcomes connected to therapist adherence to the model, to parenting practices like monitoring, and behavior contracts (Zajac et al., 2015). Further studies are warranted in connection to Multisystemic therapy's theory of change, which supports that improvement in family functioning reduces externalizing behavior and negative peer associations both for majority families and ethnically diverse families (Henggeler, 2011). This study sought to add to the MST literature on parental stress and the mediator of family functioning while considering ethnicity as a moderator. The following chapter will review the methodology of the study.

Chapter III: Methods

The first and second chapters provided a review of the literature related to parental stress and adolescent externalizing behavior and family functioning as a mediator in the treatment of youth problem behavior and Multisystemic therapy (MST). This chapter reviews the research purpose and presents the research questions and hypotheses. Next, is the description of the study's participant recruitment and the description of the measures used in this study. Finally, the research procedures will be outlined, preceded by an explanation of the statistical tests used to analyze the data and test the hypotheses.

Research Purpose

The purpose of this study was to assess the relationship between parental stress and adolescent externalizing behavior and the mediation of family functioning on this relationship. Specifically, the researcher examined parental stress related to the Stress Index for Parents of Adolescents (SIPA; Sheras et al., 1998) and the Barriers to Treatment Participation (BTPS; Kazdin et al., 1995) in relation to adolescent externalizing behavior related to the Childhood Behavior Checklist (CBCL; Achenbach, 1991). The research used quantitative archival data to determine the relationship between caregiver parental stress and adolescent externalizing behavior. The mediation of family functioning of families participating in Multisystemic therapy was also reviewed.

Further research is needed for examining the specific role of parental stress in MST families and the relationship it has to MST youths' adolescent externalizing behavior. Although parental stress has been linked to adolescent externalizing behavior, the specifics around the types of parental stress of MST parents, to best of the knowledge of this researcher, has not been exclusively studied. Understanding the facets of parental stress can help better conceptualize

how the different types of parental stress influence the youth's behavior. In relation to the family functioning, it is already known that family functioning has some level of impairment when families come into treatment for MST.

Examining the family functioning dimensions as they change during MST treatments and applied interventions connects to the MST Theory of Change, which is addressed to intervene risk factors that contribute to adolescent externalizing behavior. Furthermore, considering the role of ethnicity in family functioning can have more treatment implications in MST and other parent training programs for adolescent externalizing behavior.

Investigating the parents' experience, perceived stress, and the impact it has on youth problematic behavior can help identify explanations of MST treatment efficacy. Also, investigation of the mediation role in this relationship, through the real-life lens of the ethnic diversity for MST families, can help identify explanations of MST treatment efficacy. This, in turn, can contribute to the current need for understanding diverse families in a demographically changing society and strengthen the tenets of mechanisms of change in the MST treatment approach. Identification of the mechanisms of change in family functioning, through the relationship implications of parental stress and adolescent externalizing behavior through this research, supports the clinical and research community; it also considers the importance of assessing and intervening in the caregiver's parental stress when it behaves as a contributing factor in adolescent externalizing behavior and becomes a barrier to treatment progress. Continuing to add the rich MST literature can support the overall quest to interrupt the trajectory of adolescent externalizing behavior to adult lifespan problems and empower families to be that ultimate solution both in short-term and long-term MST treatment outcomes.

Research Questions and Hypotheses

Research Question 1

Do significant correlations exist between parental stress as measured by the Stress Index for Parents of Adolescents (Sheras et al., 1998) and the Barriers to Treatment Participation Scale (Kazdin et al., 1995) and adolescent externalizing behavior as measured by the Child Behavior Checklist (Achenbach, 1991) among families participating in Multisystemic therapy?

Hypothesis 1. There will be a significant correlation between parental stress and adolescent externalizing behavior as reported by families participating in Multisystemic therapy.

Null hypothesis 1. There will be not any relationship between parental stress and adolescent externalizing behavior as reported by families participating in Multisystemic therapy.

Research Question 2

Does ethnicity function as a moderator between parental stress and adolescent externalizing behavior?

Hypothesis 2. Ethnicity will function as a moderating variable between parental stress and adolescent externalizing behavior.

Null hypothesis 2. Ethnicity is not a moderating variable between parental stress and adolescent externalizing behavior.

Research Question 3

Does family functioning (family adaptability and family cohesiveness) as measured by the Family Adaptability and Cohesion Evaluation Scale – III (Olson et al., 1985) mediate the relationship between parental stress and adolescent externalizing behavior?

Hypothesis 3a. Families reporting higher levels of family adaptability predict reductions between parental stress and adolescent externalizing behavior.

Null hypothesis 3a. Families reporting lower levels of family adaptability predict reductions between parental stress and adolescent externalizing behavior.

Hypothesis 3b. Families reporting higher levels of family cohesion predict reductions between parental stress and adolescent externalizing behavior.

Null Hypothesis 3b. Families reporting lower levels of family cohesion predict reductions between parental stress and adolescent externalizing behavior.

Research Question 4

Is there any difference between ethnic groups of family pretest and posttest reporting of family functioning (family adaptability and family cohesion)?

Hypothesis 4a: There will be a significant difference in the level of family adaptability between ethnic groups.

Null hypothesis 4a: There will not be a significant difference in the level of family adaptability between ethnic groups.

Hypothesis 4b: There will be a significant difference in the level of family cohesion between ethnic groups.

Null hypothesis 4b: There will not be a significant difference in the level of family cohesion between ethnic groups.

Research Design

This study utilized a longitudinal design that was used to determine the relationship between parental stress and adolescent externalizing behavior in MST, and to also examine if this relationship was mediated by family functioning and moderated by ethnicity. There was no control for the parent grant study nor this current study. All the treated families received MST. Other research studies for MST treated families have used control groups of treatment as usual

programs adding support for MST treatment effectively addressing adolescent externalizing behavior, improving family functioning of diverse families (Henggeler & Schaeffer, 2016; Huey et al., 2000; Schoenwald et al., 2003)

Selection of Participants

The participants were recruited and participated in the Federally funded (NIMH 1R01MH68813) 5-year grant with the principal investigator, Phillippe Cunningham. The original study was designed to examine the interaction of variables (child, family, environment, and treatment adherence) that impact MST treatment outcomes of MST in community mental health care settings. The parent study was conducted in Denver, Colorado using two well-established MST community mental health sites providing MST services to 185 youth and families. The families met inclusionary criteria for the following: (a) the adolescent was between the ages of 12 and 17 years, (b) the adolescent was referred for externalizing behavior, (c) the adolescent's residence was in the parent's home for at least one-month pretreatment and (d) at least one parent willingly participated in treatment. Also, the family was required to speak either English or Spanish to participate in the study.

The current study used a longitudinal design to examine changes in parental stress, adolescent externalizing behavior, and family functioning during MST treatment. These changes were assessed at two times, at the beginning of treatment and at the end of treatment.

The MST treatment was carried out by master's level therapists who are supervised by MST supervisors and an MST expert. The MST therapists carry a low workload of four to six families and have availability to families for 24 hours a day and seven days a week. The duration of treatment typically lasts for four to six months. There were 49 therapists who participated in the treatment of 185 youth and families. The average demographics of the therapists are as

follows: 31.8 years old, gender was 67% female, and ethnicity was 77% Caucasian, 12% Latino/a, 2% African American, and 9% other ethnicity.

The ethnicities of the families participating in the study were 53% Caucasian, 25% Latino/a, 19% African American, and 3% other classifications. The reasons for treatment involved an array of externalizing behavior problems in the home, school, and community around absconding, aggression, rule breaking, status offenses, delinquency, mental health symptoms, substance use, family conflict, and school challenges.

In the present study, archival data from the grant was analyzed to assess change in the parental stress for the parents, adolescent externalizing behavior for the youth, and family functioning for families that received MST treatment. The focus of the current study was on measures given within the first month after treatment began (Time 1) and post treatment (Time 4).

This section provides a complete description of the measures used in the study and presents the information on reliability, validity, origin, and appropriateness or rationale for inclusion in the study. The instruments that were used for this study were included in

Instrumentation

Demographic Questionnaire. Participants of youth and parent were administered demographic questionnaires that asked their age, gender, race, ethnicity, status of finances including financial assistance, parent level of education, and youth legal status during treatment Time 1 (T1). The reasons for referral were also gathered. Specifically, caregiver ethnicity was examined as a moderator of the relationship between the predictor variable and adolescent externalizing behavior as reported by parent.

Adolescent Externalizing Behavior. Parents completed the Child Behavior Checklist (CBCL), which consists of 113 behavior problem items applicable to children ranging between the age of four to 18 years old (Achenbach, 1991). The CBCL has three behavior scales that measure for internalizing, externalizing, and total behavior problems in the child. It is also a well-validated measure of youth functioning and, in previous studies, has related to MST treatment effects (Eeren et al., 2018; Tiernan et al., 2015) Specifically for the present study, the externalizing behavior scale, as completed by the parent, was used to assess the adolescent's externalizing behavior as an outcome measure where each item had a rating of zero to two, zero being "not true" and two being "very true" or "often true." The measure was provided to the parent five times during the parent study. Specifically, Time 1 (pretreatment) and Time 4 (discharge) will be reviewed for this current study (Rescorla et al., 2017)

Family Functioning. The Family Adaptability and Cohesion Evaluation Scales-III (FACES-III; Olson et al., 1985) was used to measure family functioning on two key dimensions of adaptability and cohesion and was used as the mediation measure. The subscale for adaptability assessed the parent's perception of the family's ability to adjust to environmental and developmental stressors while renegotiating the family structure, rules, and roles within the relationships. The Cohesion subscale evaluated the parent's perception of family closeness, bonding, and emotional support. The scale items are rated on a 5-point Likert scale rating from 1- almost never to 5- almost always. Low scores signify negative parental perceptions of familial adaptability and cohesion and the high scores reflect positive family functioning.

Parental Stress. The Parenting Stress Index (PSI; Abidin, 1983) has three domains for child, parent, and life stress to assess the source of parenting stress. The parent domain has seven subscales of Competence, Isolation, Attachment, Health, Role Restriction, Depression, and Spouse. The life stress scale highlights the experiences of stress outside of the parent-child relationship. There are 15 scale items answered on a 6-point Likert scale rating from 1- totally disagree to 6- totally agree. The PSI is the most cited parenting stress measure and has demonstrated adequate psychometric properties with good norms and internal consistency; it also has excellent content validity, construct validity, validity generalization, and treatment sensitivity as well as adequate clinical utility (Holly et al., 2019).

The Barriers to Treatment Participation Scale (BTPS; Kazdin et al., 1987; Kazdin et al., 1997) is a 44-item questionnaire that measures perceived barriers to participation in treatment; the parent version was used in this study. The BPTS has four subscales that identify the stressors and barriers to treatment participation which are competing activities/life stressor, treatment demands and issues, perceived relevance of treatment, and relationship with the therapist (Tiernan et al., 2015). Only the subscale for competing activities/life stressors instrument was used in the present study.

Procedures

Approval will be sought from Liberty University's Institutional Review Board to conduct this present study by meeting the requirements for the protection of human subjects (see Appendix A). All associated consent forms and procedures for the original grant study were approved by the IRB of the Medical University of South Carolina (MUSC), Emory University, and the University of Colorado School of Medicine (see Appendix B). All the families willingly

participated and met the inclusion criteria for MST. The present study used archival data obtained from the larger parent grant, which reduced the levels of risk to participants. The names of the participants were not known nor used and instead an identification number was provided to maintain confidentiality.

In the parent grant study, families were contacted via referrals in two well-established community social services agency sites and invited to participate in the study (Ryan et al., 2013). Upon meeting MST-inclusionary criteria and signing all consent forms, the parents and youth completed the first assessment within a month of the referral (Time 1) at their homes. Additional assessments were completed at different times in the treatment when included the first 12 weeks (Time 2), 12-14 weeks (Time 3), within two weeks after discharge (Time 4) and six months after discharge (Time 5). Only information collected at times 1 and 4 were evaluated for the current study.

Data Processing and Analysis

The archival data was downloaded into IBM SPSS Statistics Version 26 (Hayes & Rockwood, 2017). Data was screened and missing data was excluded from the analysis. Preliminary analyses investigated the role of demographic variables related to the youth, family, and therapist characteristics to assess for possible confounds. Specifically, age, gender, and race of the youth, caregiver, and therapist, ethnic match of the caregiver and therapist, and family socioeconomic status were evaluated as potential confounds. Additionally, the time that the pretreatment assessment occurred was also analyzed as a possible confound due to the difficulty of getting participants to complete evaluations prior to starting therapy. Confounds were controlled statistically.

Chapter Summary

This chapter reviewed the methodology that was used to examine the relationship between parental stress and adolescent externalizing behavior and the mediation of family functioning in this relationship from archival data. A sample of 185 families receiving MST therapy was taken. Recruitment efforts included a convenience sample and participants completed a demographic questionnaire, the PSI (Abiden, 1983), the BTPS (Kazdin et al., 1987; Kazdin et al., 1997), the FACES-III (Olson et al., 1985), and the CBCL (Achenbach, 1991). The results of the data analysis will be presented in Chapter Four. Chapter Five will discuss the results and the implications for treatment for adolescent externalizing behavior.

Chapter IV: Results

Restatement of the Purpose

The purpose of this study was to examine how parental stress related to adolescent externalizing behavior using secondary data. The study examined reasons parents of youth with externalizing behavior, as measured by the Child Behavior Checklist (CBCL; Achenbach, 1991), experienced parental stress using the Stress Index for Parents of Adolescents (SIPA; Sheras et al., 1998), and the Barriers to Treatment Participation Scale (BTPS; Kazdin et al., 1995). Also, the mediation of family functioning on this relationship was reviewed using the Family Adaptability and Cohesion Scale III (FACES III; Olson et al., 1985) as was the moderating role of ethnicity on family functioning. Participants in the original study were asked to provide demographic information and answer questions related to parent experience of stress, adolescent externalizing behavior, and family functioning at the beginning and end of Multisystemic therapy treatment.

Data Screening

Results were assessed for missing data during the initial investigations. It was found that 185 participants completed Time 1 (T1) measure assessments and 16 were missing from Time 4 (T4). From the study, demographic information such as gender, age, ethnicity, and socioeconomic status of the parents and adolescents was compared the families with missing data, which resulted in no significant differences between the families observed. Potential outliers and relationships among the variables were investigated.

Participant Demographics

A total of 185 families agreed to participate in MST treatment through the informed consent and the results are displayed in Table 4.1. The families that participated were asked their age and participants were also asked to indicate their gender as male or female. 85% of the parents were female and 15% were male. From the sample of 185 parent and adolescent participants, participants were asked their ethnicity/racial background. 185 parent participants of the sample reported Caucasian 53%, African American 18%, and Latino 24%. Participants were asked to indicate their relationship status. 99 out of the 185 parent participants reported being in a marriage or relationship. Parents who did not have a significant other did not complete the SIPA subscale for relationship with spouse or partner.

Table 4.1

Demographic Information for Adolescent, Parent and Therapist

	Mean (SD) or % Population
Adolescent (N = 185)	
Age	15.35 (1.28)
Male Gender	65%
Female Gender	35%
Ethnicity / Race	
Caucasian	48%
African American	28%
Latino/a	24%
Parent (N = 185)	
Age	43.62 (9.60)
Male Gender	15%
Female Gender	85%
Ethnicity / Race	
Caucasian	53%
African American	18%
Latino/a	25%
Therapist (N = 49)	

Age	31.84 (7.59)
Male Gender	33%
Female Gender	67%
Ethnicity / Race	
Caucasian	77%
Latino/a	12%
Other	11%
Therapist / Caregiver Same Race (Ethnic Match)	43%

Data Analysis

Tests of Assumptions

Data analysis was performed using IBM SPSS Statistics Premium Version 26. The evaluation of assumptions for the multilevel analyses was conducted during the preliminary analyses. The assumption of independence was assessed due to families being nested within therapists. The intraclass correlation coefficient (ICC), a quantitative measure of the similarity among observations within classes such as families being nested within therapists (Baldwin et al., 2011), was explored. For multilevel analysis, the ICC provides a summary of the overall strength of an association in between group variance for each outcome score that derived from nesting within therapists (Irimata, & Wilson, 2018). A cut off value of .10 is often utilized in identifying problematic levels of non-independence (Vajargah & Masoomehnikbakh, 2015). The calculated ICC found in the sample ranged from 0 to 0.03. Therefore, there was no concern about the nesting within therapists as there was minimal variances that occurred at the between level for therapists.

Descriptive Analyses

Descriptive statistics for adolescent external behavior, parental stress, and family function were shown in Table 4.2. There was noticeable improvement in terms of adolescent external behavior CBCL from T1 to T4. Comparison of variables between the participants exhibited clinically significant change at T4.

Table 4.2

Means and Standard Deviations of Variables Evaluated in the Study

	Mean (SD)		
	T1 (N = 185)	T4 (N = 169)	Change
CBCL Externalizing - Parent	64.61 (12.19)	57.02 (13.85)	8.52 (11.00)
SIPA Life Restrictions - Parent	2.59 (.85)	2.50 (.95)	.13 (.81)
SIPA Relationship with Spouse/Partner - Parent	2.52 (.80)	2.44 (.83)	.07 (.94)
SIPA Social Alienation – Parent	2.03(.77)	2.09 (.88)	-.04 (.70)
SIPA Incompetence/Guilt – Parent	2.66 (.69)	2.49 (.77)	.21 (.61)
BTT Stressors - Therapist	1.74 (1.62)	2.40 (2.36)	-.69 (2.52)
Family Cohesiveness – Parent	33.36 (6.39)	33.66 (7.04)	-.41 (6.11)
Family Adaptability - Parent	23.88 (5.20)	22.88 (5.32)	1.07 (5.38)

A paired-samples t-test was conducted to compare the difference of T1 and T4 for CBCL externalizing and SIPA subscales and BTPS stressor. There was a significant difference in the score for CBCL externalizing from T1 to T4, ($M = 8.52$, $SD = 11.00$); $t(161) = 9.90$, $p = 0.000$. These results suggest that adolescents from T1 to T4 had decreases in their externalizing behavior. There was a significant difference in the score for SIPA life restrictions, T1 – T4 ($M = .15$, $SD = .82$); $t(163) = 2.31$, $p = .022$. These results suggest that parents from T1 to T4 had decreases in their parental stress from life restrictions. There was a significant difference in the score for SIPA incompetence, T1 – T4 ($M = .20$, $SD = .61$); $t(163) = 4.21$, $p = .000$. These results suggest that parents from T1 to T4 had decreases in their parental stress from incompetence or guilt. There was a significant difference in the score for BTPS stressor from T1 to T4 ($M = -.72$, $SD = 2.54$); $t(168) = -3.68$, $p = .000$. These results suggest that parents from T1 to T4 had increases in their parental stress from competing activities/life stressors (see Table 4.3).

Table 4.3

Paired Samples Test

	Mean	Std Dev	S.E. Mean	<i>t</i> value	<i>df</i>	Sig (two- tailed)
Pair 1 CBCL Externalizing T1 – CBCL Externalizing T4 Score	8.57	11.03	.87	9.90	161	.000
Pair 2 SIPA Life Restrictions T1 – SIPA Life Restrictions T4 Score	.15	.82	.06	.27	163	.022
Pair 3 SIPA Incompetence/Guilt T1 – SIPA Incompetence/Guilt T4 Score	.20	.61	.05	.29	163	.000
Pair 4 BTPS Competing Activities/Stressors T1 - BTPS Competing Activities/Stressors T4	-.72	2.54	.20	-3.68	168	.000

Research Question One: Association between Parental Stress and Adolescent Externalizing Behavior

Hypothesis one stated that there would be a significant correlation between parental stress and adolescent externalizing behavior as reported by families participating in Multisystemic therapy. This hypothesis was tested and confirmed by analyzing the SIPA – Parent Domain subscales of life restriction (LFR), relationship with spouse or partner (REL), social alienation (SOC), and incompetence/guilt (INC), and the BTPS – subscale competing activities/life stressor (STRESSOR) and the CBCL – externalizing score.

Correlations. Pearson correlations were performed to examine the relationship between parental stress through the SIPA life restriction, SIPA relationship with partner/spouse, SIPA social alienation, SIPA incompetence/guilt and the BTPS stressors and obstacles that compete with treatment and adolescent externalizing behavior through the CBCL externalizing. For

Pearson correlation results and significance levels see Table 4.4. The analysis indicated a significant relationship between CBCL externalizing change score and SIPA life restrictions change score ($r = .163, p < .05$), SIPA social alienation change score ($r = .203, p < .01$) and SIPA incompetence/guilt change score ($r = .313, p < .01$) and BTPS competing activities/life stressor ($r = .245, p < .01$). This suggests a significant correlation between parents with parental stress in the form of life restrictions, social alienation, and incompetence/guilt, competing activities/life stressor and their adolescents with externalizing behavior.

Table 4.4

Correlations between CBCL – Externalizing and SIPA and BTPS Change Score T1-T4

	SIPA life restrictions	SIPA social alienation	SIPA incompetence/guilt	BTPS stressor
CBCL externalizing	.163*	.203**	.313**	.245**
<i>N</i>	167	167	167	160

*Correlation is significant at the 0.05 level (2-tailed, $p \leq .05$)

**Correlation is significant at the 0.01 level (2-tailed, $p \leq .01$)

The analysis also indicated a significant correlation between CBCL externalizing and BTPS stressors and obstacles that compete with treatment ($r = .245, p < .01$). This suggests a correlation between parents with other life stressors and their adolescents with externalizing behavior.

Regression. A multiple regression was conducted among the stress predictor variables of the SIPA and BTPS after controlling for covariates. The analysis was significant, $F(13,141) = 3.068, p = .001$ (see Table 4.5).

Table 4.5

Repeated Measures Analysis of Variance Adolescent Externalizing Behavior by Parental Stress

Model	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Regression	13	4139.03	318.39	3.07	.001
Residual	141	14633.64	103.79		
Total	154	18772.67			

Using the enter method it was found that SIPA life restriction, social alienation, incompetence, and BTPS stressor explain a significant amount of the variance in the value of CBCL externalizing ($F(13,141) = 3.068, < .05, R^2 = .220, R^2_{Adjusted} = 0.149$). See Table 4.6.

Table 4.6

Model Summary^b

Model	<i>R</i>	<i>R²</i>	<i>R²_{ADJUSTED}</i>	<i>StdE</i>	<i>R²_{CHANGE}</i>	<i>F_{CHANGE}</i>
	.470	.220	.149	10.19	.143	6.44

The analysis showed significance for parental stress in the form of incompetence/guilt that predict adolescent externalizing behavior (Beta = 4.62, $t(154) = 2.78, p < .05$) and, also, parental stress in the form of competing activities/stressor that predict adolescent externalizing behavior (Beta = 1.13, $t(154) = 2.78, p < .05$). The analysis did not show significance for parental stress in the form of life restrictions (Beta = -.50, $t(154) = -.41, p < .05$) or parental stress in the form of social alienation (Beta = 1.77, $t(154) = 1.18, p < .05$) (see Table 4.7).

Table 4.7

Regression Analysis Summary for Parental Stress Predicting Adolescent Externalizing

Variable	<i>B</i>	<i>St. Error</i>	β	<i>t</i>	<i>p</i>
(Constant)	6.24	12.35		.76	.446
SIPA life restrictions	-.50	1.24	-.038	-.42	.685

SIPA social alienation	1.77	1.50	.114	1.18	.241
SIPA incompetence/guilt	4.62	1.66	.255	2.78	.006
BTPS stressor	1.13	.408	.219	2.78	.006

Note: $R^2_{ADJUSTED} = .149$

Research Question Two: Moderation Analysis

A moderation analysis was used to examine the effects of ethnic groups as a moderator on the change score of T1-T4 predictor variables (i.e., parental stress and externalizing behavior). Testing on ethnicity moderating the relationship between parental stress and externalizing behavior was explored. Issues of high multicollinearity with the interaction term and the variables were centered on the moderation analysis and there were no significant effects of control variables on outcomes.

Parent ethnicity (see Table 4.8) was examined as a moderator of the relation between significant predictors of parental stress SIPA incompetence/guilt and BTPS stressor and CBCL externalizing. Interaction between BTPS stressor and parent ethnicity was significant ($p. = 0.006$) (see Figure 4.1). Interaction between SIPA incompetence and parent ethnicity was significant ($p. = 0.006$) (see Figure 4.2). The Latino/a group had the weaker relationship between parental stress change in the SIPA incompetence/guilt and BTPS competing activities/life stressor, compared to Caucasian and African American group.

Table 4.8

Descriptives for Adolescent Externalizing Behavior CBCL Externalizing Change Score by Race Group

	<i>N</i>	Mean	<i>SD</i>
Latino/a	40	8.48	10.889
African American	33	8.21	10.971

Caucasian	89	8.76	11.226
Total	162	8.57	11.026

Figure 4.1.

Association between Parent Barriers to Treatment Participation Stressor Subscale and externalizing behavior by Ethnicity/Race Group

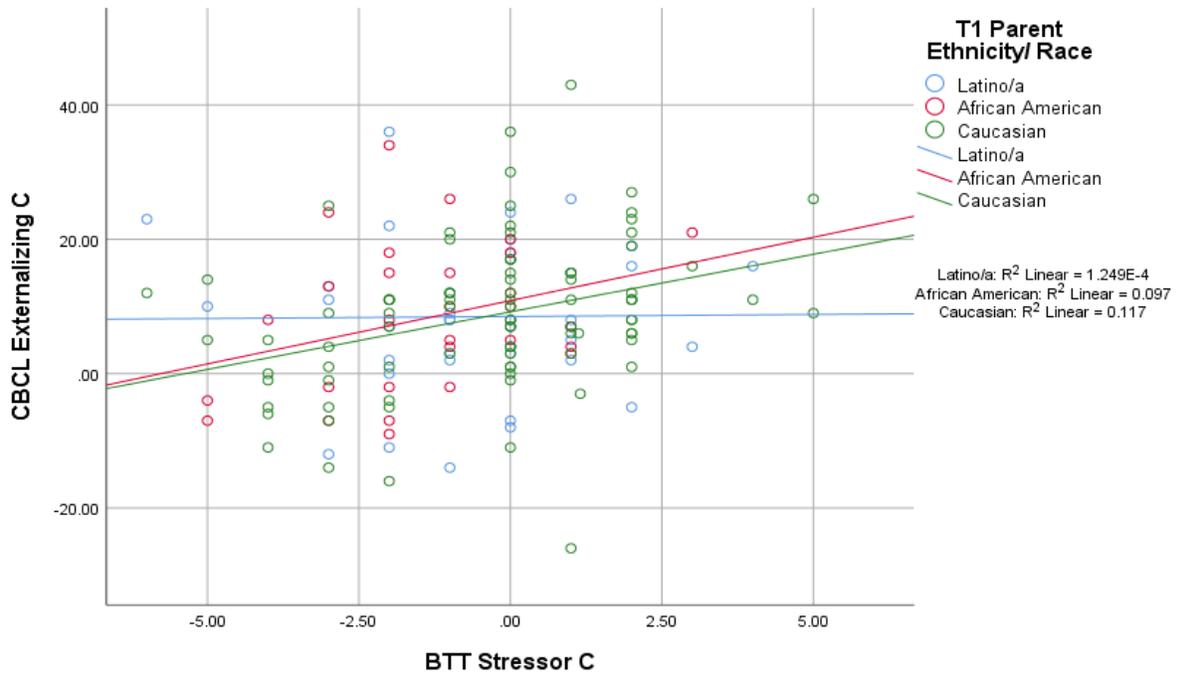
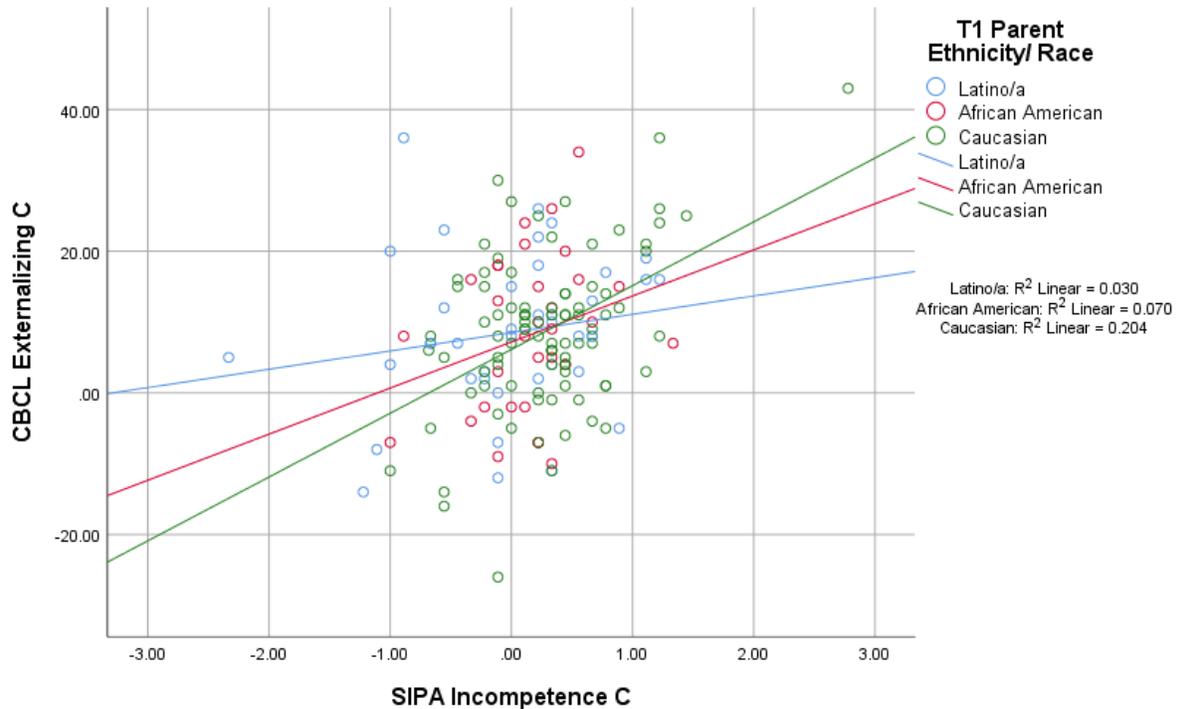


Figure 4.2.

Association between Parent Stressor Index for Parents of Adolescents Incompetence and externalizing behavior by Ethnicity group



Hypothesis two stated that ethnicity would function as a moderating variable between parental stress and adolescent externalizing behavior. This hypothesis was tested by using separate analyses that involved a dependent t-test for T1 and T4, then a moderation analysis. The assumptions were met concerning the skewness of the change score all being less than one, which indicated the distributions were approximately normal. These results suggest that there is a moderating role of ethnicity on adolescent externalizing behavior and parental stress. Specifically, the results suggest that when families complete MST treatment, externalizing behavior and parental stress for life restrictions and incompetence decrease.

Research Question Three: Mediation Analysis

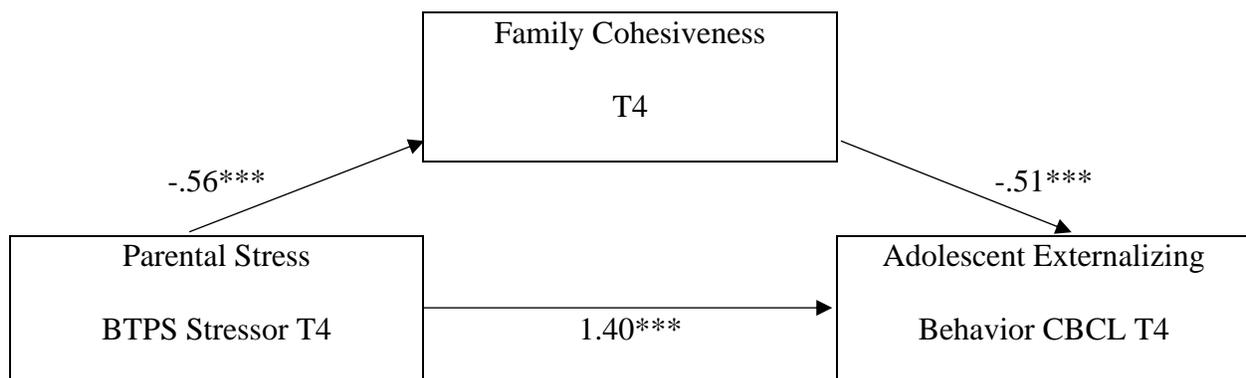
As part of the mediation model using Hayes’ Process Model 4 to investigate the mediating role of family cohesiveness and family adaptability in the relationship between T4 parental stress of SIPA life restrictions, social alienation, relationship with spouse/partner and incompetence/guilt, BTPS stressor and adolescent externalizing behavior of CBCL externalizing.

Family adaptability did not show any significant mediating effect between the relationship of parental stress subscales and adolescent externalizing behavior. The stress index for parents of adolescents (SIPA) relationship with spouse/partner did not show any significance.

With barriers to treatment participation scale (BTPS) as the indicator of parental stress, parental stress was negatively associated with family cohesiveness ($\beta = -0.56, p = 0.04$), indicating parents with more stressors are less likely to have family cohesiveness, which in turn, less family cohesiveness was associated with more adolescent externalizing behavior problems ($\beta = -0.51, p = 0.0035$). In addition, the direct path for parental stressors total score to adolescent externalizing behavior was positive and significant ($\beta = 1.40, p = 0.009$), suggesting the more stressors parents have, the more external behavior problems for adolescents. Parental stressors were found to have an indirect effect on adolescent externalizing behavior through family cohesiveness ($\beta = 0.28$), where the 95% bootstrap confidence interval for unstandardized indirect effect was 0.01 to 0.66. In combination, parental stressor and family cohesiveness and other covariates explained 45.5% of the total variance in adolescent externalizing behavior problems (see Figure 4.3).

Figure 4.3.

Standardized regression coefficients for the relationship between parental stress – stressor and adolescent externalizing behavior as mediated by family cohesiveness.

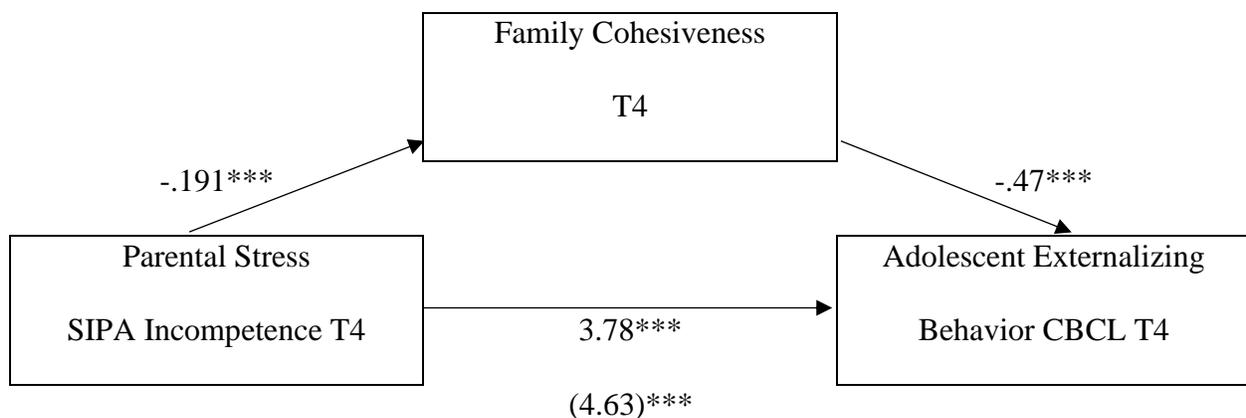


(1.68)***

For the SIPA incompetence subscale, parental stress was negatively associated with family cohesiveness ($\beta = -1.91$, $p = 0.009$), indicating parents with more stressors are less likely to have family cohesiveness, which in turn, less family cohesiveness was associated with more adolescent externalizing behavior problems ($\beta = -0.47$, $p = 0.007$). In addition, the direct path for parental stressors total score to adolescent externalizing behavior was positive and significant ($\beta = 3.78$, $p = 0.012$), suggesting the more stressors parents have, the more external behavior problems for adolescents. Parental stressors were found to have an indirect effect on adolescent externalizing behavior through family cohesiveness ($\beta = 0.90$), where the 95% bootstrap confidence interval for unstandardized indirect effect was 0.07 to 1.85 (see Figure 4.4).

Figure 4.4.

Standardized regression coefficients for the relationship between parental stress – incompetence and adolescent externalizing behavior as mediated by family cohesiveness.

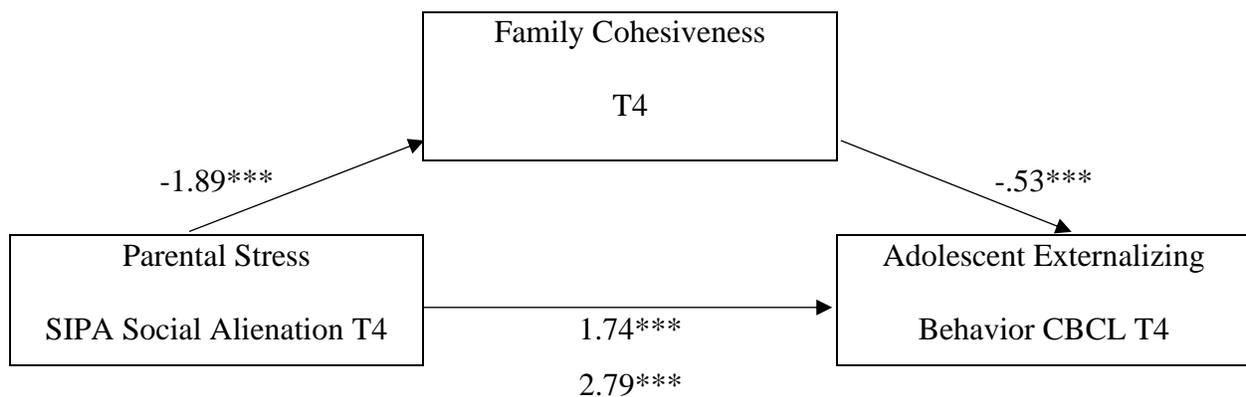


For the SIPA social alienation subscale, parental stress was negatively associated with family cohesiveness ($\beta = -1.89$, $p = 0.003$), indicating parents with more stressors are less likely to have family cohesiveness, which in turn, less family cohesiveness was associated with more

adolescent externalizing behavior problems ($\beta = -0.53, p. = 0.002$). In addition, the direct path for parental stressors total score to adolescent externalizing behavior was positive and significant ($\beta = 1.74, p. = 0.183$), suggesting the more stressors parents have, the more external behavior problems for adolescents. Parental stressors were found to have an indirect effect on adolescent externalizing behavior through family cohesiveness ($\beta = 1.0103$), where the 95% bootstrap confidence interval for unstandardized indirect effect was 0.20 to 2.06 (see Figure 4.5).

Figure 4.5.

Standardized regression coefficients for the relationship between parental stress – social alienation and adolescent externalizing behavior as mediated by family cohesiveness.

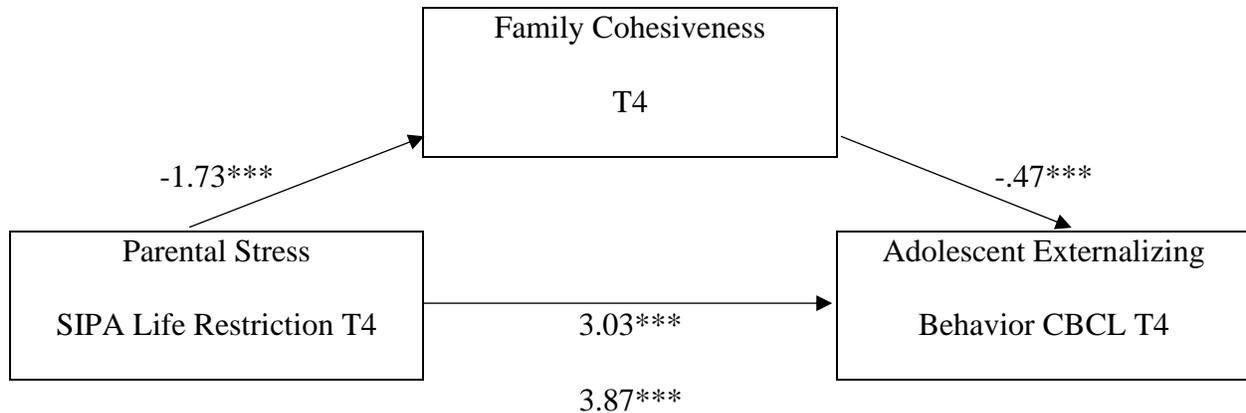


For the SIPA life restriction subscale, parental stress was negatively associated with family cohesiveness ($\beta = -1.73, p. = 0.003$), indicating parents with more stressors are less likely to have family cohesiveness, which in turn, less family cohesiveness was associated with more adolescent externalizing behavior problems ($\beta = -0.47, p. = 0.003$). In addition, the direct path for parental stressors total score to adolescent externalizing behavior was positive and significant ($\beta = 3.03, p. = 0.01$), suggesting the more stressors parents have, the more external behavior problems for adolescents. Parental stressors were found to have an indirect effect on adolescent

externalizing behavior through family cohesiveness ($\beta = 0.8223$), where the 95% bootstrap confidence interval for unstandardized indirect effect was 0.11 to 1.66 (see Figure 4.6).

Figure 4.6.

Standardized regression coefficients for the relationship between parental stress – life restrictions and adolescent externalizing behavior as mediated by family cohesiveness.



Hypothesis Three A stated that families that reported higher levels of family adaptability would predict reductions in parental stress found in the SIPA subscales life restrictions, social alienation, and incompetence/guilt and BTPS stressor and adolescent externalizing behavior in CBCL externalizing was not supported.

Hypothesis Three B stated that families that reported higher levels of family cohesion would predict reductions in parental stress life restrictions, social alienation, relationship with spouse/partner and incompetence/guilt and BTPS stressor and adolescent externalizing behavior was supported with the exception for relationship with spouse/partner.

Research Question Four: Family Function Changes by Ethnic Groups

Hypothesis four stated that there would be a significant difference in the levels of overall pretest and posttest reporting of family cohesion and family adaptability between ethnic groups. Hypothesis was tested utilizing repeated measures ANOVA on family function variables,

FACES-III Cohesiveness, and FACES-III Adaptability subscales. Interactions for caregiver ethnicity and parent reports on FACES-III were not significant. There was not a significant effect between T1 and T4 Family Cohesiveness, $F(2, 161) = 0.77, p < .0005$; Wilk's $\Lambda = 0.991$, partial $\eta^2 = .009$ (see Figure 4.7). There was not a significant effect between T1 and T4 Family Adaptability, $F(2, 161) = 0.77, p < .0005$; Wilk's $\Lambda = 1.235$, partial $\eta^2 = .015$ (see Figure 4.8).

Figure 4.7

Family Cohesiveness Pretest and Posttest by Parent Ethnicity/Race

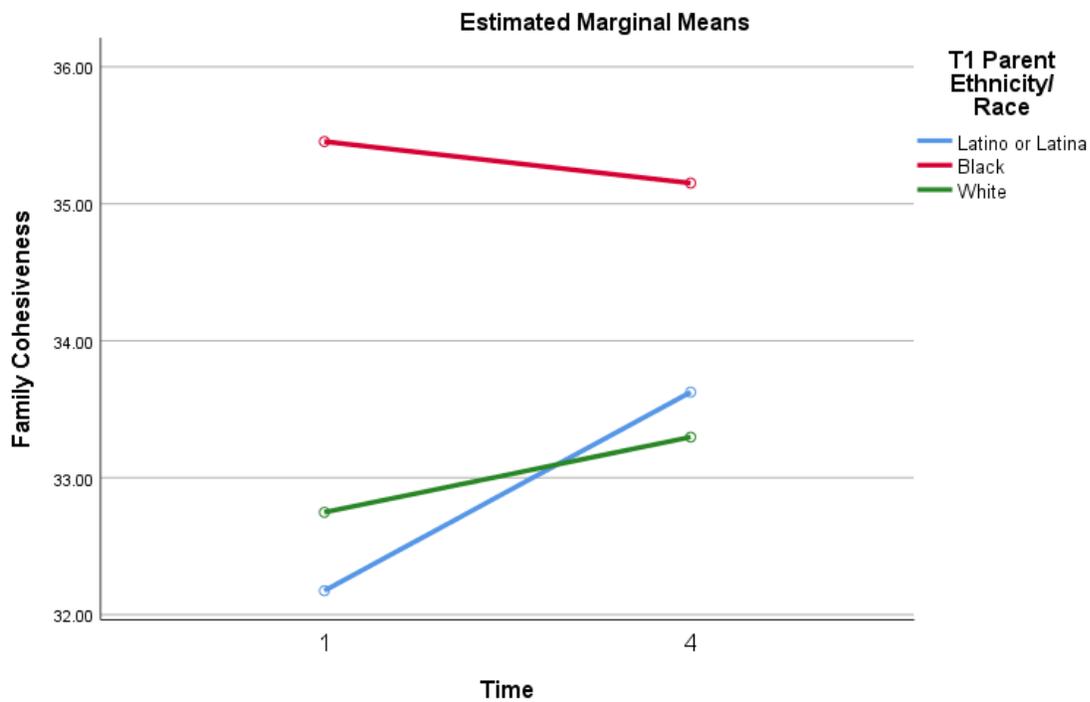
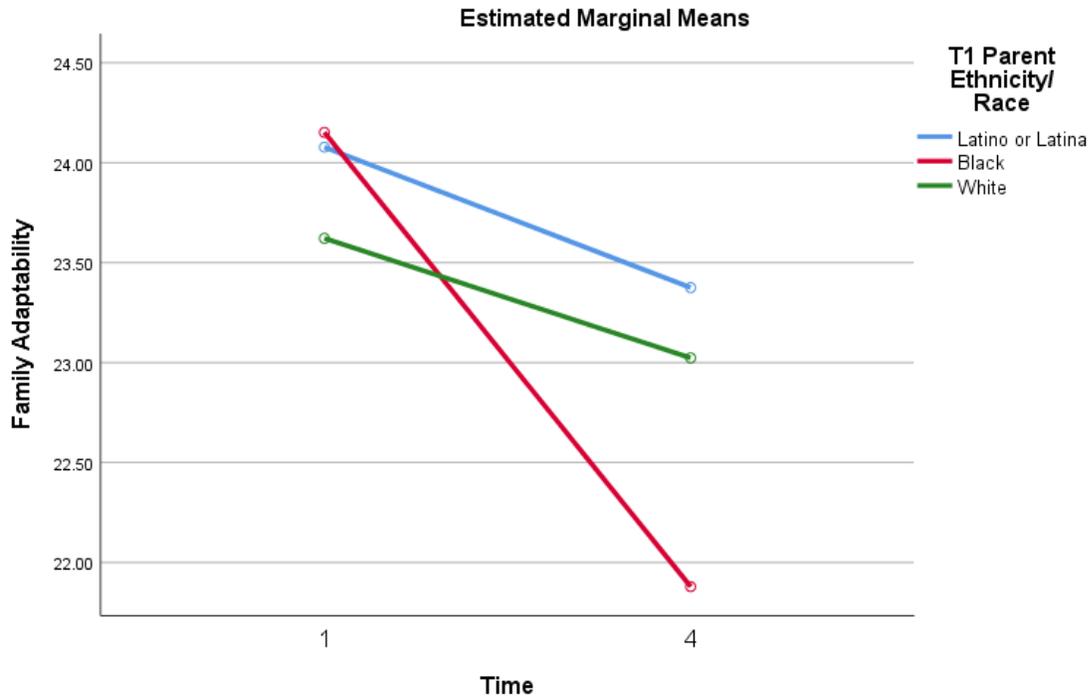


Figure 4.8

Family Adaptability Pretest and Posttest by Parent Ethnicity/Race.



A general linear model was used to run a repeated measures ANOVA for T1 and T4 of the mediating variable Family Cohesiveness for parent ethnicity of Latino, African American, and Caucasian. The same process was used for T1 and T4 mediating variable Family Adaptability for parent ethnicity. The means and standard deviations were gathered for Family Cohesiveness and Family Adaptability (see Table 4.9).

Table 4.9

Means and Standard Deviations of Mediator Variables Evaluated in the Study

	Mean (SD)			
	T1	SD	T4	SD
Family Cohesiveness – Parent				
Latino/a	32.175	6.736	33.625	6.663
African American	35.455	5.799	35.151	7.412
Caucasian	32.747	6.375	33.297	7.212
Family Adaptability - Parent				
Latino/a	24.078	6.579	23.275	5.596
African American	24.152	5.702	21.879	6.670
Caucasian	23.622	4.181	23.023	4.694

Chapter Summary

A sample of 185 families of parents and adolescents recruited from two MST licensed program sites in Denver, Colorado participated in this study. Hypothesis One, which stated there would be a significant correlation between parental stress and adolescent externalizing behavior as reported by families participating in Multisystemic therapy, was supported. Hypothesis Two, which stated ethnicity would function as a moderating variable between parental stress and adolescent externalizing behavior, was supported. Hypothesis Three A, which stated that families reporting higher levels of family adaptability would predict reductions in adolescent externalizing behavior, was not supported. Hypothesis Three B, which stated that families reporting higher levels of family cohesion would predict reductions in adolescent externalizing behavior, was supported. Therefore, less family cohesiveness was associated with more adolescent externalizing behavior problems and more family cohesiveness had less externalizing behavior problems. Hypothesis Four A, which stated there would be a significant difference in the level of family adaptability between ethnic groups, was supported. Hypothesis Four B, which stated there would be a significant difference in the level of family cohesion between ethnic groups, was not supported. These results will be discussed in greater detail in Chapter Five.

Chapter V: Summary, Conclusions, and Recommendations

The purpose of this research was to (a) explore the relationship between parental stress and adolescent externalizing behavior, (b) examine the moderating role of ethnicity in the relation between parental stress and adolescent externalizing behavior, (c) determine if family functioning, family adaptability, and family cohesion functioned as a mediator in the relationship between parental stress and adolescent externalizing behavior, and (d) assess for a significant difference in the levels of overall family functioning, family adaptability, and family cohesion between ethnic groups pretest and posttest. Chapter Five reviews the data analysis and results presented in Chapter Four and expands on the significance of the research findings. A review is provided for the explanations for the research questions, implications for practice and research, limitations of the study and future research recommendations are outlined.

Summary of Findings

Summary of Demographics

Families participating in MST treatment from two well-established community social services agencies in Denver, Colorado provided consent to participate in this study. There were 185 parent and adolescent participants. 85% of the parent participants were female and 15% were male and from this parent sample, 53% were Caucasian, 18% African American and 24% Latino. 99 out of the 185 parent participants reported being in a marriage or relationship. The adolescent participants were 65% male and were an average age of 15.3 years old. The MST Therapists were 67% female, 33% male, and their ethnicity/ race were 77% Caucasian, 12% Latino and 11% other. The therapist/caregiver same race (ethnic match) was 43%. The adolescents met MST inclusionary criteria, in which they were 12 to 17 years old, at risk of out-

of-home placement due to antisocial or delinquent behaviors, and/or youth involved with the juvenile justice system.

Parents and adolescents' various measures pertaining to the parent study completed the first assessment within a month of the referral (Time 1) at their homes. Additional assessments were completed at different times in the treatment; these included the first 12 weeks (Time 2), 12-14 weeks (Time 3), within two weeks after discharge (Time 4), and six months after discharge (Time 5). Only information from the measures of the SIPA, BTPS, CBCL, and FACES-III were used from the collections at Time 1 and Time 4 and evaluated for the current study.

Hypothesis One

In this study, research question one asked, "Do significant correlations exist between parental stress as measured by the Stress Index for Parents of Adolescents (Sheras et al., 1998) and the Barriers to Treatment Participation Scale (Kazdin et al., 1995) and adolescent externalizing behavior as measured by the Child Behavior Checklist (Achenbach, 1991) among families participating in Multisystemic therapy?" A significant correlation was found between parental stress (three out of four SIPA subscales for life restrictions, social alienation and incompetence/guilt, and BTPS subscale competing activities/life stressor) and their adolescents externalizing behavior (CBCL subscale externalizing behavior) as reported by ethnically diverse families participating in Multisystemic therapy. These findings are supported by the diathesis stress model, which confirms family stressor interactions within the parent and child and the responses in externalizing behavior from the adolescent to their family environment (Rioux et al., 2016). MST families are multi-problem families that experience various types of stressors

with parents that have adolescents with challenging behavior that are related to demographics such as residing in a metropolitan city, having male adolescents, and parent singlehood.

A correlation between parental stress and adolescent externalizing behavior was established by the Barroso and colleagues' (2018) meta-analysis study that systematically reviewed 133 studies of children with externalizing behavior across various clinical groups of Autism Spectrum Disorder/Developmental Delays, chronic illness, with or at-risk for behavioral and/or mood disorders; they found a correlation with a large effect size between parenting stress and child externalizing behavior problems with a weighted *ES* of $r = 0.57$ (95% *CI* = 0.56 to 0.58, $p < 0.001$). Additionally, the meta-analysis found that the level of parental stress and familial stress and adversity, such as social assistance, interpersonal conflicts at home, and domestic violence also predicted treatment participation and outcomes (Barroso et al., 2018).

The families in this study resided in the metropolitan city of Denver, Colorado, which potentially exposed them to various community problems that were sources of stress. Some families in MST are impacted by limitations in access to resources. The Williams and Sánchez qualitative study (2013) conducted on inner city African American families found that time poverty (limited time), lack of access, lack of financial resources, and lack of awareness often produced stressed and interfered with the parents' ability to be more involved in their adolescent's schooling. Challenges in the school system are a typical referral behavior in MST. Weiss and colleagues (2013) found that adolescents in MST were truant, approximately .4 standard deviations higher than those in the control group. In consideration of the correlation between parental stress and adolescent externalizing behavior and the common referral behavior school problems, it is likely that problem behavior in the school system was not the only system

that was impacted. Multi-problems in multiple systems would heighten parental stressors and without an increase in parental involvement, it would likely exacerbate the adolescents' challenges in the school and other systems. These types of barriers can typically be found for families participating in MST treatment.

When viewing the gender, a higher percentage of families (65%) had a male. Gender has been discussed as an important demographic in consideration of externalizing behavior. The Bacchini and colleagues' (2011) study resulted in the male adolescents having higher levels of involvement in antisocial behavior due to high level of stressor exposures, such as community violence (both as a victim and a witness) and low level of parental monitoring. Male adolescents may more often than females exhibit externalizing behavior and therefore, require more parental bandwidth during adolescence, adding to the parental stress experience.

The present study had 86 single parents out of 185 parent participants which is almost half (46.5%) of the sample. Consideration to the family constellation of single parent families are important as they have their own unique set of challenges. Potentially relevant findings highlight the specific SIPA subscales for life restrictions and social alienation as being correlated to CBCL externalizing which may suggest that single parents struggle with having sufficient time to connect with their social support and invest in parental control practices when compared to two-parent families that can share the parental load (Cho et al., 2018). Adolescents from single parent-families appear more at risk for exhibiting social difficulties, poor academic functioning, drug abuse, juvenile delinquency, and aggressive behavior (Hamama & Ronen-Shenhav, 2012) which are the typical referral behaviors seen in MST.

Hypothesis Two

Research question two was “Does ethnicity function as a moderator between parental stress and adolescent externalizing behavior?” In the analysis, ethnicity functioned as a moderating variable of the relation between parental stress SIPA incompetence/guilt and BTPS stressor and adolescent externalizing behavior CBCL externalizing. Interaction between BTPS stressor and parent ethnicity was significant ($p. = 0.006$) and the interaction between SIPA incompetence and parent ethnicity was significant ($p. = 0.006$). The African American and Caucasian groups saw the strongest change in the T1-T4 change score. In other words, these two groups had the stronger relation of the SIPA incompetence/guilt and BTPS competing activities/life stressor and externalizing behavior. African American and Caucasian parents had the strongest impact of higher levels of incompetence/guilt and life stressors predict high levels of adolescent externalizing behavior. The Latino group had the weaker relationship between parental stress change in the SIPA incompetence/guilt and BTPS competing activities/life stressor and did not have a more pronounced change compared to the Caucasian and African American group. This outcome is similar to the Barroso and colleagues’ (2018) study where their moderation analyses also indicated a larger effect for the relation between parenting stress and child externalizing behavior problems with non-Hispanics. There are two potential reasons for these findings. The first is possible underreporting of psychosocial challenges, parenting stress, and adolescent behavior problems (Villatoro et al., 2014). Latino families may not easily report the struggles occurring in the home to a non-family member and professional therapist. The second is cultural value of *familismo* where Latino mothers value the loyalty of family, reciprocity, and solidarity that reduces parenting stress and performs as a protective factor (Gallo

et al., 2009). This value may promote Latino parents to actively seek out solutions through consulting others in their family network to consult and problem-solve.

Caucasian and African American families have likely been more often exposed to therapy, perhaps facilitating their ability to be more open about the challenges experienced in the areas of parental stress and youth behavioral issues. Latinos may not have had this exposure to formal therapy to address problems. The limited therapy exposure may have been augmented further if English was not spoken or if English proficiency was limited as the language barrier was found when accessing treatment or knowledge about existing therapies (Kim et al., 2011). An additional finding suggests that, for Latinos, ethnic matching may be beneficial in supporting the therapeutic alliance, as it promotes treatment adherence and can lead to reductions in youth problematic behavior (Chapman & Schoenwald, 2011).

Hypothesis Three

Research question three asked, “Does family functioning (family adaptability, family cohesiveness) as measured by the Family Adaptability and Cohesion Evaluation Scale – III (Olson et al., 1985) mediate the relationship between parental stress and adolescent externalizing behavior?” The mediating role of family cohesiveness and family adaptability was explored in the relationship between T4 parental stress of SIPA life restrictions, social alienation, relationship with spouse/partner and incompetence/guilt, BTPS stressor and adolescent externalizing behavior of CBCL externalizing. In this study, it was found that family cohesion mediated the relationship between parental stress SIPA subscales of life restrictions, social alienation, and incompetence/guilt and BTPS life stressors and adolescent externalizing behavior of CBCL externalizing. Family cohesion, which supports relational interactions within the family members as demonstrations of shared affection, support, commitment, and helpfulness

(Rabinowitz et al., 2016) mediated the relationship between parental stress and externalizing behavior. Across these MST families, higher levels of cohesiveness, as marked by effective communication and having family members support each other during times of distress and particularly assist in effectively decreasing the distress of the adolescent, would intervene and interrupt stressor interactions within the home environment (Rabinowitz et al., 2016). From a cultural perspective, the strengths of African American families in their family interconnectedness through collectivism, parental support, social support and religiosity would likely mediate the likelihood of adolescents engaging in risk behaviors and are more likely to reflect having adaptive behaviors (Washington et al., 2013). For Latino families, family cohesion in the form of *familismo* would instill the relationship investment to place a strong emphasis on family unity and coming together (Calzada et al., 2014).

Several studies have found that positive family functioning (Tolou-Shame et al., 2018) holds several benefits for the parents and adolescent. Family functioning is a predictor of adolescent externalizing behavior (Henneberger et al., 2013; Huey et al., 2000; Weiss et al., 2015). It was also found that families with adolescents with externalizing behavior had more conflict and chaotic relationships than other well-adjusted families, according to the pre- and post-treatment results (Joh et al., 2013). It is important to note that this study had partial mediation of family functioning dimension of family cohesion where the parent was composed of 85% mothers and 15% fathers. In the Burstein and colleagues' study (2012), parental perceptions of family functioning were mediators in the relationship between parental psychopathology and adolescent problems as reported by fathers and not mothers. Findings highlight the importance of examining how mothers and fathers may differentially impact

adolescent problems in substance-abusing families (Burstein et al., 2012). The parent gender may warrant further attention in how they are leveraged during treatment.

In the present study, families did not report higher levels of family adaptability predicting reductions in adolescent externalizing behavior. There was no significant difference. This finding may further reflect the scarcity of studies reporting on the specific dimension of family adaptability. The finding of no mediation from family adaptability was different than the Joh and colleagues' (2013) study, which found that low family adaptability during adolescence led to an increase in adolescent behavior problems due to the higher demands for attention and the parents being unable to adequately meet the needs. Also, Crow and Lyness (2014) reported that when increased levels of family adaptability exist, families could reframe mental illness or distress in a more positive light and therefore, would impact the relationship between parental stress in the form of life restrictions and life stressors with this lens and facilitate better communication around these challenges. These two studies mark the benefit of families having the skills for family adaptability. Perhaps the absence of this specific mediation highlights the possible need for treatment focus on ensuring parents and families have the skills to increase their tolerance and ability to be flexible during the ups and downs of life.

Families, in this present study, reported higher levels of family cohesion predicting reductions in adolescent externalizing behavior. Stronger levels of cohesion were reported as beneficial for youth development of socially appropriate responses and the management of social tensions. Family cohesion helps adolescents with negative emotional reactivity learn how to better regulate their state of emotions and to develop more positive perceptions of others, decreasing their negative responses based on anger or fear when threats are perceived

(Rabinowitz et al., 2016). Therefore, the improvement of family cohesion in MST treatment supported the reduction of the adolescents externalizing behavior and in the parental stress for life restrictions, social alienation, and incompetence/guilt and BTPS life stressors in the families receiving MST.

Hypothesis Four

The fourth question inquired, “Is there any difference between ethnic groups of family pretest and posttest reporting of family functioning (family adaptability and family cohesion)?” There was not a significant difference in the level of any of these dimensions. Although, several studies found the importance of family-focused interventions and improving family functioning for delinquency prevention (Henneberger et al., 2013), there were not significant changes in family functioning as reported by the measure. Similar findings resulted for the Weiss and colleagues (2013) study on the independent randomized clinical trial for Multisystemic therapy. Parents reported on the FACES Cohesion and Adaptability subscales and no significant effects involving time nor significant changes either overall or differentially by group were found. Perhaps, the parents were unable to mark changes in these dimensions once they were established at the beginning of treatment or were not able to relate how changes in parent and adolescent behavior along with new skills connected to overall family functioning, family adaptability, and family cohesion. Significant differences can also be lacking in the parents’ reporting while they learn and implement a range of parent interventions that place a heavy focus on high levels of structure for behavior management, which impacts the parent and adolescent experience of closeness (cohesion) and flexibility (adaptability) as negative (Fosco et al., 2019).

Implications for Practice

The present study contributes to the field of adolescent development, family studies, and cultural applications of ethnicity. While the primary purpose of this study was to further establish the relationship between parental stress and adolescent externalizing behavior as well as to review the roles of family functioning as mediators and ethnicity as a moderator for families receiving MST, there were also some critical implications that amplify the continued need for advocacy by ensuring access to evidence-based treatments like MST for clients and families of all ethnic/racial backgrounds and that treatments be culturally informed in their approach. The ACA Advocacy Competencies (2010) ground the counselor's actions to work on a continuum for advocacy while incorporating multicultural and ethical considerations. Therapists working with ethnically diverse families supporting parents who intervene in their adolescent's problematic behavior that often leads to juvenile justice interventions can truly support across the advocacy continuum starting from the microlevel of direct client advocacy to community/system advocacy to social advocacy, one family at a time.

This research confirms the impact of parental stress on adolescents and families. Findings can be generalized for ethnically diverse families of adolescents with externalizing behavior if the inclusionary criteria remain, selection process remains well-designed, and sample is representative of study population. Clinicians can increase awareness around the impact of parental stress, family functioning, and ethnic/cultural values within the context of the family constellation to better assess and intervene in these aspects and their relations to youth problematic behavior. Findings highlight the key types of parental stress that is correlated with problematic behavior in youth. Specifically, social alienation, life restrictions, incompetence/guilt and competing activities/life stressors. Four out of five of these types of parental stress relate to external stressors while incompetence/guilt is more likely related to

direct parenting stress. Findings on family functioning studies highlight the relevance of family-centered interventions aimed at increasing family cohesion, family adaptability, and ways to effectively cope with the parenting demands of child health and behavior-related (Mendes et al., 2016). Huey and colleagues (2014) conducted a summary of ten meta-analyses evaluating culturally tailored treatments and concluded relevant findings in which culturally tailored interventions were efficacious for ethnic minorities and that due to the increased cultural diversity and uptake of mental health care, it is beneficial to use treatment approaches with effective cultural competence strategies.

For therapists and supervisors conducting individual, group, and family therapy, it is relevant to assess for parental stress in clients as it is linked to clinically presenting problems. Parental stress is a real experience that will likely only increase over time with the added expectations and responsibilities (Sayer et al., 2004) and can impact treatment retention and outcomes. Kazdin (2019) recently recommended adding a treatment component that addresses the parental sources of stress to improve treatment outcome for the child. The effects of treatment can be observed in improvements across the adolescent's behavior, reductions in parental stress and depression, including the improvement of family relations. Targeting parental stress entails focusing on external stressors in addition to the parenting stress that results from the challenging adolescent behavior. Intervention design can address the parental experience of social alienation, life restrictions, competing activities/life stressors by using this assessment language to identify the type of stressor that is most significant for the parent (McQuillan et al., 2019).

Attention is warranted around improving parental stress in mothers due to their multifaceted role within families and their community, as according to the U.S. Department of

Labor (2018), which reports that 71.5% of mothers work outside of the home. If the aim is to improve parent well-being to increase their ability for parenting and participation in treatment, there needs to be a focus for supporting parents to manage various types of stress (Kazdin, 2019). Single parenting is also an element to consider in the full context of a client's experience due to the added responsibilities around managing the home and parenting. Counselors and supervisors can better target clinical problems when they understand the contributing factors and develop treatment plans accordingly. Detailed assessments and the prioritization of the most relevant and important type of parental stress can lead the clinician and parent to co-create interventions that provide skills training and resiliency training (Bowman, 2012).

Cultural implications for family specific intervention can further assist in harnessing cultural strengths or adaptive coping strategies for ethnic/racial family groups. For African American mothers and parents of color, this can include seeking extended family support, religious beliefs as effective cognitive buffers, and enlisting community-level supports (Bowman, 2012; Mendenhall et al., 2013). For Latino families, additional time may be needed for joining and strengthening the therapeutic alliance to gain a better sense of the problems. Consideration of leveraging the cultural values, such as *familismo*, to enlist support for the parent in the management of stress and the adolescent behavior problems. Also, *respeto* instills a sense of honor and respect to one another in the family and can be a construct to leverage for increasing adolescent participation in the family and treatment (Morena et al., 2017). This can be an important value during adolescence where honoring the parent(s) and the eldest in the family can promote responsible behavior. These two culturally specific values in Latino families have been found to predict lower rates of substance use, which is a common treatment target in MST (Moreno et al., 2017). For American families and likely Caucasian families, individualism that

promotes the youth's independence and pursuit of their personal aspirations, despite it being different than the family's expectations, are often supported (Oudekerk et al., 2015). It may be beneficial to frame the treatment process and the parent's involvement as directly contributing to overall independence and autonomy.

MST therapy incorporates the nine MST treatment principles to guide treatment, which would include targeting the types of parental stress that contribute to adolescent referral behavior (Zajac et al., 2015). Specifically, the use of Principle Two (focusing on positives and strengths, in particular) offers the MST therapist the opportunity to identify the positives assessed in the youth, family, and ecology and use the strengths as levers for positive change in ethnically diverse families. The use of the family strengths in treatment ensure that the parents and family use skills and resources that already exist in their repertoire, which can increase their sense of confidence and hope, intentionally identify protective factors, and decrease the tensions and frustrations by engaging in problem solving. This strength-based approach reinforces the natural personal parental strengths that will be more readily available to them when facing chronic adversity within their home and community. In-depth assessment of parental struggles is to include the types of parental stress, the intersectionality of family functioning and the impact cultural/ethnic values. Consideration is needed during the clinical assessment for three types of parental stressors, (1) parenting stress, (2) life stressors, and (3) ethnic/cultural stress; this can help clinicians better understand the caregiver strain experience (Green et al., 2020; Mayberry & Heflin, 2013; Östberg & Hagekull, 2013). MST treatment is among the most effective form of therapies for adolescents with externalizing behavior as it focuses on understanding the faulty relational interactions between the adolescent and the parent, peers, school, and community. Essentially, this treatment target specificity can enhance treatment participation, retention, and outcomes of families from diverse ethnic backgrounds.

Implications for Counselor Education

Educators and researchers in the field of counseling, counselor education, and supervision lead the education and training of students seeking a degree. The research study indicated the relationship between parental stress and adolescent externalizing behavior and the moderation of ethnicity and partial mediation of family functioning (family cohesion) on this relationship. Parental stress can impact any parent who can be a client, student and counselor educator, and researcher. The increased demands parents face in parenting during this time in history comes with the associated complex issues connected to modern parental involvement expectations. Pandemic related social and health adjustments and racial societal tensions have serious potential implications for treatment participation, retention and outcomes, student attrition, and counselor educator and research career burnout.

Effective counseling and the equipping of counselors-in-training, counselor educators, and supervisors are needed now more than ever. Advocacy to ensure that clients have access to counseling begins with ensuring that there are sufficient counselors-in-training that complete their degrees as well as retaining counselors, counselor educators, and supervisors. To heighten educating and training resources, it is necessary to build on the current knowledge base of barriers to treatment engagement and participation. Parental stress will reach many clients, students, and professionals and adolescents will only face more challenges in a tech-savvy world where access has no bounds. It is critical to prepare counselors to treat some family-level needs, even when their focus is individual counseling, because group therapy can reveal at home or family of origin challenges. Students and counseling professionals who are increasing nontraditional students may also present to have family related challenges that can influence their retention. Ultimately, helping these students and professionals to generalize leveraging their

strengths of support in academia, peers, and family in their treatment work with parents will also help them persist in serving clients while they battle parenting challenges themselves. If we are to meet the needs of counseling and mental health care, we must retain our students and professionals to do the clinical work necessary to aid our society.

Implications for Research

The current study highlights important research-oriented gaps, calling for more treatment process research and for additional studies on parental stress and the emerging parental exhaustion literature. Treatment models like MST use their theory of change to inform their treatment targets. Further evaluation to identify the mechanisms of change by which treatments bring about positive and therapeutic is warranted (Kazdin & Nock, 2003). Particularly, understanding what processes and interventions lead to the improved adolescent's behavior and the family's functioning during the course of treatment. MST is a treatment model informed by years of research. Continued research focus on this therapy can influence policy and legislation that ensures adolescents and families receive the best research-informed care. This pushes the envelope on the continuum of advocacy that goes beyond the scope of client and community advocacy and moves into social/political advocacy that is most needed during these times of needed social justice.

In the emerging literature for parental burnout, there are three negative outcomes when a parent transitions from parental stress to burnout; parent's express emotional distancing to their child, have a sense of being ineffective in their parental role, and have overwhelming exhaustion (Mikolajczak et al., 2018). Findings highlighted the increased risk for parental burnout could be found in parent characteristics, parenting practices, and family functioning (conflict, inter-parental disagreement, poor partner satisfaction, and family disorganization) (Mikolajczak et al.,

2018). Studying parental stress in efforts to seek both prevention and treatment can stop the pathway that leads to parental burnout and places even high risks on the child and youth in the home.

Recommendations for Future Research

The present study contributed to the existing literature regarding the relationship between parental stress and adolescent externalizing behavior. The study addressed gaps in the literature regarding the moderation role of ethnicity and the mediating role of family functioning in the relationship between parental stress and adolescent behavior. Although, further studies on treatment process are warranted in the area of parental stress and the negative outcomes that have been linked to child development and problem behaviors, it is important to simultaneously consider the unique needs of ethnically diverse families, single parenthood, and female caregivers. Evidence-based family therapies have demonstrated efficacious results and can be further enhanced with research in these three areas that are more commonly seen in treatment.

The field of mental health care and the profession of family counseling for adolescents with problem behavior continues to grow through ongoing learning and responsiveness to the specific needs for young people, parents, and families in our communities. There are benefits for future research to further examining the protective factors within families and parents that enhance their resources and skills to meet the needs of their child, family, and self as the impact of each individual has heavy considerations within society.

Limitations of the Study

There were several limitations in the current study that may have affected the results and generalizability of the study. One limitation was the use of secondary data and the potential impact over time on changing family demographics and instrumentation. The primary study

occurred several years ago and despite families representing a diverse sample of race/ethnicity, current demographics may differ.

At the time of the study, FACES-III (Olson et al., 1983) was the best measure for assessing the family functioning dimensions. Later, FACES-IV (Olson, 2011) was developed, which added the ability to measure the curvilinearity of the family cohesion and flexibility due to the six scales: two balanced for cohesion and flexibility and four unbalanced for rigid, chaotic, enmeshed, and disengaged measurements (Rivero et al., 2010). The changes in the scale allowed for a better scoring system and profile that combine the balanced and unbalanced features of family functioning through evaluating the curvilinear aspects of family functioning (Rivero et al., 2010). Also, the Spanish version of FACES-III (Olson et al., 1983e) was found to be a valid and reliable measurement and simultaneously had limitations in the flexibility dimension when compared to the American English version (Forjaz et al., 2002). Lastly, the Spanish translation process for this instrument was not explained nor did it have an in-depth empirical study to assess the metrics (Rivero et al., 2010).

Another limitation was the use of the BTPS (Nanninga et al., 2016) that despite having useful information pertaining to the prediction of treatment outcomes, a limitation according to the Kazdin and colleagues' (1997) study could be found in the instrument's ability to generalize to a diverse, low-income, urban population of children and families. In Kazdin and colleagues (1997) study, the test sample was mainly composed of Caucasian (63.6%), which reported above the federal poverty level income (Colonna-Pydyn, Gjesfjeld, & Greeno, 2007).

Another potential limitation was the current study's decision to use the parents' responses to the selected measures for the study. This contrasts with the primary study where the assessments were completed by the parents, adolescents, and therapists. For the assessment of parental stress, there were parent versions and therapist versions included to gather multiple perspectives.

Another limitation in this study was the use of self-report instruments, which could lead to participation bias. It was also unknown whether the parents were motivated in their responses by external factors or a desire to present their adolescent in a more positive or negative manner. Finally, the decision to analyze the measures administered during Time 1 and Time 4 could have potentially missed capturing the progress potential and generalization of the family treatment advances after treatment was completed. Limitations such as these can be considered for different degrees of impact in the study.

Chapter Summary

This chapter presented a summary of the findings, implication for practice, implication for research, limitations of the study, and recommendations for future research. First, parental stress and adolescent externalizing behavior had a significant relationship between the SIPA life restrictions, social alienation, and incompetence/guilt, and BTPS competing activities/life stressor and CBCL externalizing. Second, ethnicity functioned as a moderator in the relationship between parental stress SIPA incompetence/guilt and BTPS stressor and adolescent externalizing behavior CBCL. African Americans and Caucasians show the strongest change while Latinos showed the weakest change in this relationship. Third, family cohesiveness played a mediating role in the relationship between T4 parental stress of SIPA life restrictions, social alienation,

relationship with spouse/partner and incompetence/guilt, BTPS stressor and adolescent externalizing behavior of CBCL externalizing while family adaptability did not. Fourth, there were no significant differences in the levels of overall family functioning, family adaptability, and family cohesion between ethnic groups. Regarding future research, replicating this study with ethnically diverse family samples from a metropolitan city in the United States and abroad would be beneficial due to the increasing impact of parental stress. Additionally, it would be important to use the most up to date version of FACES IV, which includes the dimension of family communication and the Spanish version. Future research could also go more in depth around the cultural impact derived from one's ethnicity and being a family of color. Lastly, future research could delve into the emerging parental burnout literature. The findings from this study inform current and future evidence-based family therapy, juvenile rehabilitation, and child protection.

Study Summary

The present study added to the literature on parental stress for parents of adolescents with externalizing behavior, reviewed family functioning as a mediator to this relationship, and reviewed ethnicity as a moderator. There continues to be opportunities for additions to be made for future research. A replicated investigation of MST families in a metropolitan city representative of ethnically diverse families should be made in the United States and abroad where MST is implemented to better capture the current family diversity. Examining the unique needs of ethnically diverse families will confirm the ability of MST to provide culturally appropriate treatment in its transportability. Therapy that places a strong emphasis on being culturally competent and responsive increases the chances of family treatment completion. The therapist role can be a bridge for the therapeutic relationship if they adequately assess the clients'

needs within their cultural background context and identify the client's values and perspectives (Huey et al., 2014). The treatment's ability to hone in on these cultural nuances and orient them within the treatment intervention can potentially promote beyond the temporary and propel to long standing change.

The mechanisms of change analyzed in the current study reviewed family functioning as a mediator. Family functioning acts as an important role within treatment, however, there may be some small but significant variations in ethnically diverse families. In this study, family cohesiveness was confirmed as a mediator while family adaptability seemingly was not. It may still prove fruitful to further explore family functioning in the three dimensions of family cohesiveness, family adaptability, and family communication. Family cohesion can be directly addressed in treatment for further improvement in outcomes for adolescents with externalizing behavior and parental stress.

Finally, we need to be able to consider parental and family stressors that extend beyond the cultural realms of ethnicity and impact our communities where adolescents of color reside. Considering the cultural climate in the United States, it is important to continue analyzing the psychosocial stressors for families of color and the impact of aversive experiences for African Americans, Latinos, and other groups. The Lorenzo-Blanco (2017) longitudinal study on Latino parents found a relationship between the parent's cultural stress and depressive symptoms. This predicted both parent and adolescent reporting of lower family functioning of parental cultural stress. Advocacy through the provision of treatment, counselor education, and research can meet the needs of families and communities.

The home environment is the first and primary educational institution for adolescents. Therefore, levels of parental stress can impact the home climate and inadvertently increase the

risk of perpetuating stress for this generation to the next through the transmission of repeated exposure of behaviors that are learned, modeled, and continued. Outside of the home, these stressors can impact the ways that the adolescent interacts with adults and authority figures (Hood et al., 2013). Parents, in the midst of challenging times in the States and those rearing their child during a period of adolescence, have the ability to learn and teach the skills for improving communication, peaceful family living, monitoring and supervision, and to give clear expectations on their rules. The clinical work must incorporate treatment broaching of specific psychosocial and cultural parental stressors that interfere with treatment adherence and readiness for change in families of diverse ethnicities with varying family constellation structures. It also transcends the walls of the home and the very communities that encompass these precious families.

References

- Abidin, R. (1976). *Parenting skills: Trainer's manual* (First edition.). New York, N.Y: Human Sciences Press.
- Abidin, R. R. (1990). Introduction to the special issue: the stresses of parenting. *Journal of Clinical Child Psychology, 19*, 298 –301. doi: 10.1207/s15374424jccp1904_1.
- Achenbach, T. M. & Rescorla, L. A. (2001). Manual for the ASEBA school-age forms and profiles. Burlington: University of Vermont, Research Center for Children, Youth and Families.
- American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5thed.). <https://doi.org/10.1176/appi.books.9780890425596>
- Bacchini, D., Concetta Miranda, M., & Affuso, G. (2011). Effects of parental monitoring and exposure to community violence on antisocial behavior and anxiety/depression among adolescents. *Journal of Interpersonal Violence, 26*(2), 269-292.
doi:10.1177/0886260510362879
- Baglivio, M. T., Jackowski, K., Greenwald, M. A., & Wolff, K. T. (2014). Comparison of multisystemic therapy and functional family therapy effectiveness: A multiyear statewide propensity score matching analysis of juvenile offenders. *Criminal Justice and Behavior, 41*(9), 1033-1056. doi:10.1177/0093854814543272
- Baldwin, S. A., Murray, D. M., Shadish, W. R., Pals, S. L., Holland, J. M., Abramowitz, J. S., Anderson, G, Atkins, D. C., Calbring, P., Carroll, K. M., Christensen, A., Eddinton, A. E., Fester, D. J., Keijsers, G. P. J., Koch, E., Kuyken, W., Lange, A., Lincoln, T., Stephens, R. S., Taylor, S. Trepka, C., & Watson, J. (2011). Intraclass correlation associated with therapists: Estimates and applications in planning psychotherapy

- research. *Cognitive Behaviour Therapy*, 40(1), 15-33.
doi:10.1080/16506073.2010.520731.
- Boardman, J. D., & Alexander, K. B. (2011). Stress trajectories, health behaviors, and the mental health of black and white young adults. *Social Science & Medicine*, 72, 1659–1666. doi: 10.1016/j.socscimed.2011.03.02
- Bowman, P. J. (2012). A strengths-based social psychological approach to resiliency: Cultural diversity, ecological and life span issues. In Sandra Prince-Embury & Donald H. Saklofske (Eds.), *Translating Resiliency Theory for Application with Children, Youth and Adults*, pp. 299–324. New York: Springer.
- Brady, S. S., Winston, W., & Gockley, S. E. (2014). Stress-Related externalizing behavior among African American youth: How could policy and practice transform risk into resilience? *Journal of Social Issues*, 70(2), 315-341. doi:10.1111/josi.12062
- Brannan, A. M., & Heflinger, C. A. (2001). Distinguishing caregiver strain from psychological distress: modeling relationships among child, family, and caregiver variables. *Child and Family Studies*, 10(4), 405–418.
- Brown, L. K., Tarantino, N., Tolou-Shams, M., Esposito-Smythers, C., Healy, M. G., & Craker, L. (2018). Mental health symptoms and parenting stress of parents of court-involved youth. *Journal of Child and Family Studies*, 27(3), 843-852.
doi:http://dx.doi.org.ezproxy.liberty.edu/10.1007/s10826-017-0923-1
- Burstein, M., Stanger, C., & Dumenci, L. (2012). Relations between parent psychopathology, family functioning, and adolescent problems in substance-abusing families: Disaggregating the effects of parent gender. *Child Psychiatry and Human Development*, 43(4), 631-647. doi:10.1007/s10578-012-0288-z

- Calzada, E. J., Huang, K., Linares-Torres, H., Singh, S. D., & Brotman, L. (2014). Maternal familismo and early childhood functioning in Mexican and Dominican immigrant families. *Journal of Latina/o Psychology, 2*(3), 156-171. doi:10.1037/lat0000021
- Carter, S., Blumenstein, M., & Cook, C. (2013). Different for women? the challenges of doctoral studies. *Teaching in Higher Education, 18*(4), 339-351.
doi:10.1080/13562517.2012.719159
- Cho, I. Y., Kim, J. S., & Kim, J. O. (2018). Factors influencing adolescents' self-control according to family structure. *Journal of Child and Family Studies, 27*(11), 3520-3530.
doi:10.1007/s10826-018-1175-4
- Clarke, T., Laucht, M., Ridinger, M., Wodarz, N., Rietschel, M., Maier, W., Lathrop, M., Lourdasamy, A., Zimmermann, U. S., & Schumann, G. (2011). KCNJ6 is associated with adult alcohol dependence and involved in gene \times early life stress interactions in adolescent alcohol drinking. *Neuropsychopharmacology, 36*(6), 1142-1148.
doi:10.1038/npp.2010.247
- Conger, R. D., Wallace, L. E., Sun, Y., Simons, R. L., McLoyd, V. C., & Brody, G. H. (2002). Economic pressure in African American families: A replication and extension of the family stress model. *Developmental Psychology, 38*, 179-193.
- Crandall, A., Ghazarian, S. R., Day, R. D., & Riley, A. W. (2016). Maternal emotion regulation and adolescent behaviors: The mediating role of family functioning and parenting. *Journal of Youth and Adolescence, 45*(11), 2321-2335. doi:10.1007/s10964-015-0400-3
- Crowe, A., & Lyness, K. P. (2014). Family functioning, coping, and distress in families with serious mental illness. *The Family Journal, 22*(2), 186-197.
doi:10.1177/1066480713513552

- Day, E., & Dotterer, A. M. (2018). Parental involvement and adolescent academic outcomes: Exploring differences in beneficial strategies across Racial/Ethnic groups. *Journal of Youth and Adolescence*, 47(6), 1332-1349. doi:10.1007/s10964-018-0853-2
- Deković, M., Asscher, J. J., Manders, W. A., Prins, P. J. M., & van der Laan, P. (2012). Within-intervention change: Mediators of intervention effects during multisystemic therapy. *Journal of Consulting and Clinical Psychology*, 80(4), 574-587. doi:10.1037/a0028482
- Diaz, A., Eisenberg, N., Valiente, C., Vanschyndel, S., Spinrad, T., Berger, R., Hernandez, M., Silva, K., & Southworth, J. (2017). Relations of positive and negative expressivity and effortful control to kindergarteners' student-teacher relationship, academic engagement, and externalizing problems at school. *Journal of Research in Personality*, 67, 3-14.
- Doom, J. R., Vanzomeren-Dohm, A. A., & Simpson, J. A. (2016). Early unpredictability predicts increased adolescent externalizing behaviors and substance use: A life history perspective. *Development and Psychopathology*, 28(4pt2), 1505-1516. doi:10.1017/S0954579415001169
- Durišić, M. (2018). Relations and communication in families of children with externalizing behavior problems. *Research in Pedagogy*, 8(2), 111-120. doi:10.17810/2015.77
- Eadeh, H., Langberg, J. M., Molitor, S. J., Behrhorst, K., Smith, Z. R., & Evans, S. W. (2019). Factor structure and convergent validity of the stress index for parents of adolescents (SIPA) in adolescents with ADHD. *Assessment*, 26(5), 825-838. doi:10.1177/1073191118754707
- Eeren, H., Goossens, L., Scholte, R., Busschbach, J., & Rijken, R. (2018). Multisystemic therapy and functional family therapy compared on their effectiveness using the propensity score

- method. *Journal of Abnormal Child Psychology*, 46(5), 1037-1050. doi:10.1007/s10802-017-0392-4
- Etkin, R. G., Koss, K. J., Cummings, E. M., & Davies, P. T. (2014). The differential impact of parental warmth on externalizing problems among triangulated adolescents. *The Journal of Genetic Psychology*, 175(2), 118-133. doi:10.1080/00221325.2013.813437
- Feinberg, M. E., Brown, L. D., & Kan, M. L. (2012). A multi-domain self-report measure of coparenting. *Parenting: Science and Practice*, 12, 1–21.
- Finan, L. J., Simpson, E., Schulz, J., & Ohannessian, C. M. (2018). Parental problem drinking and emerging adult problem behavior: The moderating role of parental support. *Journal of Child and Family Studies*, 27(4), 1175-1185. doi:10.1007/s10826-017-0953-8
- Fosco, G. M., Mak, H. W., Ramos, A., LoBraico, E., & Lippold, M. (2019). Exploring the promise of assessing dynamic characteristics of the family for predicting adolescent risk outcomes. *Journal of Child Psychology and Psychiatry*, 60(8), 848-856. doi:10.1111/jcpp.13052
- Fowers, B. J., & Olson, D. H. (1993). ENRICH Marital Satisfaction Scale: A brief research and clinical tool. *Journal of Family Psychology*, 7, 176–185.
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, 78, 350–365.
- Garbacz, L. L., Brown, D. M., Spee, G. A., Polo, A. J., & Budd, K. S. (2014). Establishing treatment fidelity in evidence-based parent training programs for externalizing disorders in children and adolescents. *Clinical Child and Family Psychology Review*, 17(3), 230-247. doi:10.1007/s10567-014-0166-2

- Giannotta, F. & Rydell, AM. (2016). The prospective links between hyperactive/impulsive, inattentive, and oppositional-defiant behaviors in childhood and antisocial behavior in adolescence: The moderating influence of gender and the parent–child relationship quality. *Child Psychiatry & Human Development*, 47(6), 857-870. <https://doi-org.ezproxy.liberty.edu/10.1007/s10578-015-0617-0>
- Gorman-Smith, D., Tolan, P. H., Henry, D. B., & Florsheim, P. (2000). Patterns of family functioning and adolescent outcomes among urban African American and Mexican American families. *Journal of Family Psychology*, 14(3), 436-457. doi:10.1037/0893-3200.14.3.436
- Green, A. L., Kutash, K., Ferron, J., Levin, B. L., Debate, R., & Baldwin, J. (2020). Understanding caregiver strain and related constructs in caregivers of youth with emotional and behavioral disorders. *Journal of Child and Family Studies*, 29(3), 761-772. doi:10.1007/s10826-019-01626-y
- Gresl, B. L., Fox, R. A., & Besasie, L. A. (2016). Development of a barriers scale to predict early treatment success for young children in poverty with behavior problems. *Clinical Practice in Pediatric Psychology*, 4(3), 249-262. doi:10.1037/cpp0000124
- Håkansson, U., Watten, R. G., Söderström, K., & Øie, M. G. (2019). The association between executive functioning and parental stress and psychological distress is mediated by parental reflective functioning in mothers with substance use disorder. *Stress and Health*, 35(4), 407-420. doi:10.1002/smi.2868
- Hamama, L., & Ronen-Shenhav, A. (2012). Self-control, social support, and aggression among adolescents in divorced and two-parent families. *Children and Youth Services Review*, 34(5), 1042-1049. doi:10.1016/j.chilyouth.2012.02.009

- Hayes, A. F., & Rockwood, N. J. (2017). Regression-based statistical mediation and moderation analysis in clinical research: Observations, recommendations, and implementation. *Behaviour Research and Therapy, 98*, 39-57.
doi:10.1016/j.brat.2016.11.001
- Hefti, S., Pérez, T., Fürstenau, U., Rhiner, B., Swenson, C. C., & Schmid, M. (2020). Multisystemic therapy for child abuse and neglect: Do parents show improvement in parental mental health problems and parental stress? *Journal of Marital and Family Therapy, 46*(1), 95-109. doi:10.1111/jmft.12367
- Henneberger, A. K., Varga, S. M., Moudy, A., & Tolan, P. H. (2016). Family functioning and high-risk adolescents' aggressive behavior: Examining effects by ethnicity. *Journal of Youth and Adolescence, 45*(1), 145-155. doi:10.1007/s10964-014-0222-8
- Henggeler, S. W. (2011). Efficacy studies to large-scale transport: The development and validation of multisystemic therapy programs. *Annual Review of Clinical Psychology, 7*(1), 351-381. doi:10.1146/annurev-clinpsy-032210-104615
- Henggeler, S. W. (2012). Multisystemic therapy: Clinical foundations and research outcomes. *Psychosocial Intervention, 21*(2), 181-193. doi:10.5093/in2012a12
- Henggeler, S. W., & Schaeffer, C. M. (2016). Multisystemic therapy®: Clinical overview, outcomes, and implementation research. *Family Process, 55*(3), 514-528.
doi:10.1111/famp.12232
- Henggeler, S. W., Schoenwald, S. K., Borduin, C. M., Rowland, M. D., & Cunningham, P. B. (2009). *Multisystemic therapy for antisocial behavior in children and adolescents* (2nd ed.). Guilford Press.

Holly, L. E., Fenley, A. R., Kritikos, T. K., Merson, R. A., Abidin, R. R., & Langer, D. A.

(2019). Evidence-base update for parenting stress measures in clinical samples. *Journal of Clinical Child & Adolescent Psychology*, 48(5), 685-705.

doi:10.1080/15374416.2019.1639515

Hood, K., Brevard, J., Nguyen, A. B., & Belgrave, F. (2013). Stress among African American emerging adults: The role of family and cultural factors. *Journal of Child and Family Studies*, 22(1), 76-84. doi:10.1007/s10826-012-9639-4

Huey, S. J., Henggeler, S. W., Brondino, M. J., & Pickrel, S. G. (2000). Mechanisms of change in multisystemic therapy: Reducing delinquent behavior through therapist adherence and improved family and peer functioning. *Journal of Consulting and Clinical Psychology*, 68, 451–467. [https://doi-org.ezproxy.liberty.edu/10.1037/0022-](https://doi-org.ezproxy.liberty.edu/10.1037/0022-006X.68.3.451)

[006X.68.3.451](https://doi-org.ezproxy.liberty.edu/10.1037/0022-006X.68.3.451)

Huey, S. J., & Jones, E. O. (2013). Improving treatment engagement and psychotherapy outcomes for culturally diverse youth and families. In *Handbook of Multicultural Mental Health*, ed. F. Paniagua, A. Yamada, pp.427– 44. Burlington, MA: Elsevier

Huey, S. J., Tilley, J. L., Jones, E. O., & Smith, C. A. (2014). The contribution of cultural competence to evidence-based care for ethnically diverse populations. *Annual Review of Clinical Psychology*, 10(1), 305-338. doi:10.1146/annurev-clinpsy-032813-153729

Hurwich-Reiss, E., Rienks, S. L., Bianco, H., Wadsworth, M. E., & Markman, H. J. (2015). exploring the role of ethnic identity in family functioning among low-income parents. *Journal of Community Psychology*, 43(5), 545-559. doi:10.1002/jcop.21701

Irimata, K. M., & Wilson, J. R. (2018). Identifying intraclass correlations necessitating hierarchical modeling. *Journal of Applied Statistics*, 45(4), 626-641.

doi:10.1080/02664763.2017.1288203

Kazdin, A. E. (1995). Child, parent, and family dysfunction as predictors of outcome in cognitive-behavioral treatment of antisocial children. *Behaviour Research and Therapy*, 33, 271–281.

Kazdin, A. E., and Nock, M. K. (2003). Delineating mechanisms of change in child and adolescent therapy: Methodological issues and research recommendations. *Journal of Child Psychology and Psychiatry* 44, 1116–1129.

Kazdin, A. E. (2018). Developing treatments for antisocial behavior among children: Controlled trials and uncontrolled tribulations. *Perspectives on Psychological Science*, 13(5), 634-650. doi:10.1177/1745691618767880

Kutash, K., Duchnowski, A. J., Green, A. L., & Ferron, J. (2011). Supporting parents who have youth with emotional disturbances through a parent-to-parent support program: A proof of concept study using random assignment. *Administration and Policy in Mental Health and Mental Health Services Research*, 38, 412–427.

Kutash, K., Garraza, L. G., Ferron, J. M., Duchnowski, A. J., Walrath, C., & Green, A. L. (2013). The relationship between family education and support services and parent and child outcomes over time. *Journal of Emotional and Behavioral Disorders*, 21, 264–276.

Javadian, R. (2011). A comparative study of adaptability and cohesion in families with and without a disabled child. *Procedia - Social and Behavioral Sciences*, 30, 2625-2630. doi:10.1016/j.sbspro.2011.10.514

- Langrehr, K. J. (2011). Racial distinctions in the psychosocial histories of incarcerated youth. *Psychosocial Services*, 8, 23–35.
- Lorenzo-Blanco, E. I., Meca, A., Unger, J. B., Romero, A., Szapocznik, J., Piña-Watson, B., Cano, M. A., Zamboanga, B. L., Baezconde-Garbanati, L., Des Rosiers, S. E., Soto, D. W., Villamar, J. A., Lizzi, K. M., Pattarroyo, M., & Schwartz, S. J. (2017). Longitudinal effects of Latino parent cultural stress, depressive symptoms, and family functioning on youth emotional Well-Being and health risk behaviors. *Family Process*, 56(4), 981-996. doi:10.1111/famp.12258
- Lundahl, B., Risser, H. J., & Lovejoy, M. C. (2006). A meta-analysis of parent training: Moderators and follow-up effects. *Clinical Psychology Review*, 26, 86–104. <https://doi-org.ezproxy.liberty.edu/10.1016/j.cpr.2005.07.004>
- Khodarahimi, S. (2011). Role of ethnicity in family functioning, personality, and depression in an Iranian sample. *The American Journal of Family Therapy*, 39(3), 255-267. doi:10.1080/01926187.2010.531658
- Martinez, W., & Polo, A. J. (2018). Neighborhood context, family cultural values, and Latinx youth externalizing problems. *Journal of Youth and Adolescence*, 47(11), 2440-2452. doi:10.1007/s10964-018-0914-6
- Masud, H., Masud, H., Thurasamy, R., & Ahmad, M. S. (2015). Parenting styles and academic achievement of young adolescents: A systematic literature review. *Quality & Quantity*, 49(6), 2411-2433. doi:10.1007/s11135-014-0120-x
- Mayberry, L. S., & Heflinger, C. A. (2013). How caregivers make meaning of child mental health problems: toward understanding caregiver strain and help seeking. *Families in*

- Society-the Journal of Contemporary Human Services, 94(2), 105–113. <https://doi.org/10.1606/1044-3894.4286>.
- McCart, M. R., & Sheidow, A. J. (2016). Evidence-based psychosocial treatments for adolescents with disruptive behavior. *Journal of Clinical Child & Adolescent Psychology, 45*(5), 529-563. doi:10.1080/15374416.2016.1146990
- McQuillan, M. E., Bates, J. E., Staples, A. D., & Deater-Deckard, K. (2019). Maternal stress, sleep, and parenting. *Journal of Family Psychology, 33*(3), 349-359. <http://dx.doi.org.ezproxy.liberty.edu/10.1037/fam0000516>
- Meier, A., Musick, K., Fischer, J., & Flood, S. (2018). Mothers' and fathers' well-being in parenting across the arch of child development. *Journal of Marriage and Family, 80*(4), 992-1004. doi:<http://dx.doi.org.ezproxy.liberty.edu/10.1111/jomf.12491>
- Mendenhall, R., Bowman, P. & Zhang, L. (2013). Single Black Mothers' Role Strain and Adaptation Across the Life Course. *Journal of African American Studies, 17*(1): 74–98.
- Mendes, Teresa Paula Gameiro Pompeu, Crespo, C. A. M., & Austin, J. K. (2016). Family cohesion and adaptation in pediatric chronic conditions: The missing link of the Family's condition management. *Journal of Child and Family Studies, 25*(9), 2820-2831. doi:10.1007/s10826-016-0447-0
- Meunier, J. C., & Roskam, I. (2007). Psychometric properties of a parental childrearing behavior scale for French-speaking parents, children, and adolescents. *European Journal of Psychological Assessment, 23*, 113–124.
- Mihalic, S. F., & Elliott, D. S. (2015). Evidence-based programs registry: Blueprints for healthy youth development. *Evaluation and Program Planning, 48*, 124-131. doi:10.1016/j.evalprogplan.2014.08.004

- Mikolajczak, M., Raes, M., Avalosse, H., & Roskam, I. (2018). Exhausted parents: Sociodemographic, child-related, parent-related, parenting and family-functioning correlates of parental burnout. *Journal of Child and Family Studies*, 27(2), 602-614. doi:10.1007/s10826-017-0892-4
- Mitchell, D., & Bailey-Fakhoury, D. (2018). Living within the veil: How black mothers with daughters attending predominantly white schools experience racial battle fatigue when combating racial microaggressions. *Du Bois Review*, 15(2), 489-515. doi:10.1017/S1742058X1800022X
- Moreno, O., Janssen, T., Cox, M. J., Colby, S., & Jackson, K. M. (2017). Parent-adolescent relationships in Hispanic versus Caucasian families: Associations with alcohol and marijuana use onset. *Addictive Behaviors*, 74, 74-81. doi:10.1016/j.addbeh.2017.05.029
- Needham, B. L. (2008). Reciprocal relationships between symptoms of depression and parental support during the transition from adolescence to young adulthood. *Journal of Youth and Adolescence*, 37(8), 893 <https://doi.org/10.1007/s10964-007-9181-7>.
- Olson, D. (2011). FACES IV and the circumplex model: Validation study. *Journal of Marital and Family Therapy*, 37(1), 64-80. doi:10.1111/j.1752-0606.2009.00175.x
- Olson, D. H. (2000). Circumplex model of family systems. *Journal of Family Therapy*, 22(2), 144–167.
- Olson, D. H. (2009). *Faces IV and the Circumplex model: validation study*. Minneapolis: University of Minnesota and Life Innovation.
- Oudekerk, B. A., Allen, J. P., Hessel, E. T., & Molloy, L. E. (2015). The cascading development of autonomy and relatedness from adolescence to adulthood. *Child Development*, 86(2), 472-485. doi:10.1111/cdev.12313

- Östberg, M., & Hagekull, B. (2013). Parenting stress and external stressors as predictors of maternal ratings of child adjustment. *Scandinavian Journal of Psychology*, *54*(3), 213-221. doi:10.1111/sjop.12045
- Pereyra, S. B., Bean, R. A., Yorgason, J. B., Lee, C., Sandberg, J. G., & Miller, R. B. (2019). Longitudinal study of externalizing behaviors in Latino/a adolescents: An examination of parenting and educational factors. *Children and Youth Services Review*, *107*, 104513. doi:10.1016/j.chilyouth.2019.104513
- Pina, A. A., Polo, A. J., & Huey, S. J. (2019) Evidence-Based Psychosocial Interventions for Ethnic Minority Youth: The 10-Year Update, *Journal of Clinical Child & Adolescent Psychology*, *48*:2, 179-202, DOI: 10.1080/15374416.2019.1567350
- Piotrowska, P. J., Tully, L. A., Lenroot, R., Kimonis, E., Hawes, D., Moul, C., Frick, P.J., Anderson, V., & Dadds, M. R. (2017). Mothers, fathers, and parental systems: A conceptual model of parental engagement in programmes for child mental health-connect, attend, participate, enact (CAPE). *Clinical Child and Family Psychology Review*, *20*(2), 146-161. doi:10.1007/s10567-016-0219-9
- Pol, T. M., Hoeve, M., Noom, M. J., Stams, G. J. J. M., Doreleijers, T. A. H., Domburgh, L., & Vermeiren, R. R. J. M. (2017). Research review: The effectiveness of multidimensional family therapy in treating adolescents with multiple behavior problems – a meta-analysis. *Journal of Child Psychology and Psychiatry*, *58*(5), 532-545. doi:10.1111/jcpp.12685
- Ponnet, K., Wouters, E., Goedemé, T., & Mortelmans, D. (2016). Family financial stress, parenting, and problem behavior in adolescents: An actor-partner interdependence approach. *Journal of Family Issues*, *37*(4), 574-597. doi:10.1177/0192513X13514409

Porreca, A., Biringen, Z., Parolin, M., Saunders, H., Ballarotto, G., & Simonelli, A. (2018).

Emotional availability, neuropsychological functioning, and psychopathology: The context of parental substance use disorder. *BioMed Research International*, 2018, 5359037-11. doi:10.1155/2018/5359037

Ratts, M. J., Toporek, R., Lewis, J. A., & American Counseling Association. (2010). ACA advocacy competencies: A social justice framework for counselors. Alexandria, VA: American Counseling Association.

Reef, J., Diamantopoulou, S., Meurs, I., Verhulst, F., & Ende, J. (2011). Developmental trajectories of child to adolescent externalizing behavior and adult DSM-IV disorder: Results of a 24-year longitudinal study. *Social Psychiatry and Psychiatric Epidemiology: The International Journal for Research in Social and Genetic Epidemiology and Mental Health Services*, 46(12), 1233-1241. doi:10.1007/s00127-010-0297-9

Renzaho, A., Mellor, D., McCabe, M., & Powell, M. (2013). Family Functioning, Parental Psychological Distress and Child Behaviours: Evidence from the Victorian Child Health and Wellbeing Study. *Australian Psychologist*, 48(3), 217–225. <https://doi.org/10.1111/j.1742-9544.2011.00059.x>

Rescorla, L. A., Ewing, G., Ivanova, M. Y., Aebi, M., Bilenberg, N., Dieleman, G. C., Döpfner, M.; Kajokiene, I.; Leung, P. W.; Plück, J.; Steinhausen, H.; Winkler M. C.; Zukauskienė, R.; Verhulst, F. C. (2017). Parent-adolescent cross-informant agreement in clinically referred samples: Findings from seven societies. *Journal of Clinical Child & Adolescent Psychology*, 46(1), 74-87. doi:10.1080/15374416.2016.1266642

Rioux, C., Castellanos-Ryan, N., Parent, S., & Séguin, J. R. (2016). The interaction between temperament and the family environment in adolescent substance use and externalizing

- behaviors: Support for diathesis–stress or differential susceptibility? *Developmental Review*, 40, 117-150. doi:10.1016/j.dr.2016.03.003
- Rivero, N., Martínez-Pampliega, A., & Olson, D. H. (2010). Spanish adaptation of the FACES IV questionnaire: Psychometric characteristics. *The Family Journal*, 18(3), 288-296. doi:10.1177/1066480710372084
- Roskam, I., Raes, M.-E., & Mikolajczak, M. (2017). Exhausted parents: Development and preliminary validation of the parental burnout inventory. *Frontiers in Psychology*, 8, 162
- Rostad, W. L., Rostad, W. L., Moreland, A. D., Moreland, A. D., Valle, L. A., Valle, L. A., . . . Chaffin, M. J. (2018). Barriers to participation in parenting programs: The relationship between parenting stress, perceived barriers, and program completion. *Journal of Child and Family Studies*, 27(4), 1264-1274. doi:10.1007/s10826-017-0963-6
- Ryan, S. R., Cunningham, P. B., Foster, S. L., & Whitmore, E. (2013). Predictors of therapist adherence and emotional bond in multisystemic therapy: Testing ethnicity as a moderator. *Journal of Child and Family Studies*, 22(1), 122-136. doi:10.1007/s10826-012-9638-5
- Sayegh, C. S., Hall-Clark, B. N., McDaniel, D. D., Halliday-Boykins, C. A., Cunningham, P. B., & Huey, J., Stanley J. (2019). A preliminary investigation of ethnic differences in resistance in multisystemic therapy. *Journal of Clinical Child and Adolescent Psychology: The Official Journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53*, 48(sup1), S13-S23. doi:10.1080/15374416.2016.1157754

- Schoenwald, S. K., Henggeler, S. W., Brondino, M. J., & Rowland, M. D. (2000). Multisystemic therapy: Monitoring treatment fidelity. *Family Process, 39*(1), 83-103.
doi:10.1111/j.1545-5300.2000.39109.x
- Sheras, P. L., Abidin, R. R., Konold, T. R. (1998). SIPA: Stress Index for Parents of Adolescents: Professional manual. Lutz, FL: Psychological Assessment Resources.
- Skowron, E., Stanley, K., & Shapiro, M. (2009). A longitudinal perspective on differentiation of self, interpersonal and psychological well-being in young adulthood. *Contemporary Family Therapy: An International Journal, 31*, 3–18.
- Solholm, R., Bjørknes, R., & Jakobsen, R. (2019). Change in mothers' perception of well-being and distress following treatment of child conduct problems. *Journal of Child and Family Studies, 28*(4), 1059-1070. doi:10.1007/s10826-019-01341-8
- Tighe, A., Pistrang, N., Casdagli, L., Baruch, G., & Butler, S. (2012). Multisystemic therapy for young offenders: Families' experiences of therapeutic processes and outcomes. *Journal of Family Psychology : JFP : Journal of the Division of Family Psychology of the American Psychological Association (Division 43), 26*(2), 187-197. doi:10.1037/a0027120
- Theule, J., Cheung, K., & Aberdeen, K. (2018). Children's ADHD interventions and parenting stress: A meta-analysis. *Journal of Child and Family Studies, 27*(9), 2744-2756. doi:10.1007/s10826-018-1137-x
- Tiernan, K., Foster, S. L., Cunningham, P. B., Brennan, P., & Whitmore, E. (2015). Predicting early positive change in multisystemic therapy with youth exhibiting antisocial behaviors. *Psychotherapy (Chicago, Ill.), 52*(1), 93-102. doi:10.1037/a0035975
- Tolou-Shams, M., Brogan, L., Esposito-Smythers, C., Healy, M. G., Lowery, A., Craker, L., & Brown, L. K. (2018). The role of family functioning in parenting practices of court-

- involved youth. *Journal of Adolescence*, 63, 165-174.
doi:10.1016/j.adolescence.2017.12.016
- Tsiouli, E., Pavlopoulos, V., Alexopoulos, E. C., Chrousos, G., & Darviri, C. (2014). Short-term impact of a stress management and health promotion program on perceived stress, parental stress, health locus of control, and cortisol levels in parents of children and adolescents with diabetes type 1: A pilot randomized controlled trial. *Explore: The Journal of Science and Healing*, 10(2), 88-98. doi:10.1016/j.explore.2013.12.004
- U.S. Department of Labor, Bureau of Labor Statistics. (2018). Data and statistics. Retrieved from <https://www.dol.gov/agencies/wb/data/mothers-and-families>
- Vajargah, K. F. & Masoomehnikbakh. (2015). Application REML model and determining cut off of ICC by multi-level model based on Markov chains simulation in health. *Indian Journal of Fundamental and Applied Life Sciences*, 5(2), 1432-1448.
- Vermulst, A. A., Kroes, G., De Meyer, R. E., & Veerman, J. W. (2011). *Parenting Stress Questionnaire OBVL for parents of children aged 0 to 18*. Nijmegen: Praktikon bv.
- Washington, T., Gleeson, J. P., & Rulison, K. L. (2013). Competence and African American children in informal kinship care: The role of family. *Children and Youth Services Review*, 35(9), 1305–1312.
- Washington, T., Rose, T., Colombo, G., Hong, J. S., & Coard, S. I. (2015). Family-level factors and African American children's behavioral health outcomes: A systematic review. *Child and Youth Care Forum*, 44(6), 819. doi:10.1007/s10566-015-9308-z
- Weber, L., Kamp-Becker, I., Christiansen, H., & Mingebach, T. (2019). Treatment of child externalizing behavior problems: A comprehensive review and meta–meta-analysis on

- effects of parent-based interventions on parental characteristics. *European Child & Adolescent Psychiatry*, 28(8), 1025-1036. doi:10.1007/s00787-018-1175-3
- Weiss, B., Han, S., Harris, V., Catron, T., Ngo, V. K., Caron, A., Gallop, R. & Guth, C. (2013). An independent randomized clinical trial of multisystemic therapy with non-court-referred adolescents with serious conduct problems. *Journal of Consulting and Clinical Psychology*, 81(6), 1027-1039. doi:10.1037/a0033928
- White, R., & Renk, K. (2012). Externalizing behavior problems during adolescence: An ecological perspective. *Journal of Child and Family Studies*, 21(1), 158-171. doi:http://dx.doi.org.ezproxy.liberty.edu/10.1007/s10826-011-9459-y
- Williams, T. T., & Sánchez, B. (2013). Identifying and decreasing barriers to parent involvement for inner-city parents. *Youth & Society*, 45(1), 54-74. doi:10.1177/0044118X11409066
- Zajac, K., Randall, J., & Swenson, C. C. (2015). Multisystemic therapy for externalizing youth. *Child and Adolescent Psychiatric Clinics of North America*, 24(3), 601-616. doi:10.1016/j.chc.2015.02.007

APPENDIX A: IRB Approval

LIBERTY UNIVERSITY

April 7, 2020

Jennifer Vinces-Cua

John Thomas

Re: IRB Application - IRB-FYI 9-20-248 The Relationship between Parental Stress and Adolescent Externalizing Behavior — The Mediating Role of Family Adaptability and Family Cohesion in Ethnically Diverse Families in Multisystemic Therapy

Dear Jennifer Vinces-Cua, John Thomas:

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study does not classify as human subjects research. This means you may begin your research with the data safeguarding methods mentioned in your IRB application.

Decision: No Human Subjects Research

Explanation: Your study does not classify as human subjects research because:

(I) it will not involve the collection of identifiable, private information.

Please note that this decision only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued nonhuman subjects research status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this determination or need assistance in determining whether possible modifications to your protocol would change your application's status, please email us at irb@liberty.edu.

Sincerely,



Administrative Chair of Institutional Research
Research Ethics Office

APPENDIX B: Permission to Use Data Set from Principal Investigator

Letter of Cooperation with Archival Data

February 5, 2020

Institutional Review Board
Liberty University
1971 University Boulevard
Lynchburg, VA 24515

To Whom It May Concern:

Jennifer Vines-Cua has requested permission to receive already existing data from a study funded through the National Institute of Mental Health (Differential response to Evidence-Based Treatment; R01MH068813) for research purposes in connection to her dissertation requirement for Liberty University.

I have been informed of the purposes of the study and the nature of the research procedures. I have also been given an opportunity to ask questions of the researcher. Consistent with Human Subject Protections, the data I provide Mrs. Vince-Cua will be stripped of all identifying information.

As the Principal Investigator, I am authorized to grant permission to have the researcher (Mrs. Vince-Cua) receive archival data for secondary analyses. The researcher (Mrs. Vince-Cua) is permitted to access this data.

If you have any questions, please contact me at (843)876-1840 or email me at cunninpb@musc.edu.

Sincerely,



Professor
Medical University of South Carolina