

A Village:
Examining the associations between social support, aggravation in parenting, child behavioral problems, and the mother-child relationship.

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DEDICATION

I would like to dedicate this dissertation to my parents, sister, grandma, boyfriend, friends, and extended family. Thank you all for believing in me. I know that I would not be at this point in my professional journey without your love, support, and humor.

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ABSTRACT

The following study examines the relationships between maternal social support (measured individually by instrumental, policy, and emotional), aggravation in parenting, child behavioral problems (CBPs), and the mother-child relationship during middle childhood (ages 6 to 12) and adolescence (13-18). The purpose of the study was to create nuance in the social support literature of the unique role of different types of maternal social support. The study collected data from a subsample of mothers and their children from Wave 5 (2007-2010) and Wave 6 (2014-2017) from the Future Families and Child Wellbeing Study (FFCW), when the child participants were 9 and 15-years-old, respectively (Reichman, 2001). Confirmatory Factor Analyses (CFAs) developed four measurement structures for each social support type. The CFAs were followed by completing four cross-lagged path analyses examining the effects of the maternal social support types and their unique longitudinal associations between the study's three variables. The study's hypothesis included that the three types of maternal social support (measured separately by instrumental, policy, and emotional) at T1 would have a significant association to each of the other three variables (aggravation in parenting, CBPs, and the mother-child relationship) at T2. The hypotheses result from the study found that maternal policy social support at T1 had a positive association with CBPs at T2. Additional cross-lagged path analysis results showed that the mother-child relationship at T1 had a significant association on aggravation in parenting and CBPs at T2. Clinical implications from the study included how clinicians could use more effective interventions when working with mothers and their families. Future directions emphasize the need for research to further explore the reciprocal nature of maternal social support to bolster external validity to better serve all families.

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Chapter 1

Introduction and Literature Review

The literature has described the mother-child relationship as a *dance*, in which both individuals influence the bidirectional interactions that have significant psychological consequences for both sides of the dyad (Bush & Peterson; Willis et al., 2021). The bidirectional nature of the mother-child relationship is likely to face new challenges as a child reaches middle childhood (ages 6 to 12) and adolescence (13-18) (Sameroff & Mackenzie, 2003), when child behavioral problems (CBPs) increase in complexity and can lead to aggravation in parenting, or the stress related to the demands of parenthood (Crnic & Low, 2002). Past research has indicated that CBPs and aggravation in parenting both contribute to decreasing closeness in the mother-child relationship overtime (Yip et al., 2017). Although the individual characteristics of the mother and child are important, socioecological theories have stressed the role of maternal social support and how it influences the associations between aggravation in parenting, CBPs, and the mother-child relationship (Yip et al., 2017). The Parenting Process model states that maternal functioning is multidetermined by a) the child's characteristics, b) the mother's characteristics, and c) the social context of maternal stress and support (Belsky, 1984). Despite the critical role that social support plays in the mother-child dyad, the literature often focuses on one type of maternal social support or conflates all support types into one broad category.

Thus, the proposed study will utilize data from the Future Families and Child Wellbeing Study (FFCW) to create cross-lagged path analyses to examine whether three maternal sources of social support (instrumental, policy, and emotional) have unique longitudinal associations between aggravation in parenting, CBPs, and the mother-child relationship and whether the Parenting Process applies similarly across different social support types.

Child Behavioral Problems in Middle Childhood and Adolescence

Broadly, researchers in child development categorize child behavioral problems (CBPs) into two groups; externalizing behaviors or actions directed toward others or objects, while internalizing behaviors are negative actions directed towards oneself (Achenbach, 1978). Examples of externalizing behaviors include bullying, oppositional behaviors, and impulsivity (Liu, Chen & Lewis, 2011). In contrast, internalizing behaviors often fall on the spectrum of anxiety/depression symptoms, including rumination, low motivation, social isolation, and behavioral avoidance (Liu, Chen, & Lewis, 2011).

Childhood temperament is one factor utilized to explain the etiology of CBPs in middle childhood and adolescence (Calkins et al., 2013). For instance, a study of 800 children (4-6 years- old) and their parents found that children with more volatile temperaments were more likely to experience externalizing problems in later development (Arslan et al., 2021). From this perspective, certain temperaments increase the risk of developing CBPs in middle childhood and adolescence (Arslan et al., 2021)

Referred to as the ‘forgotten years of development,’ middle childhood (ages 6 to 12) is a time when children experience multiple physical, emotional, and social changes (Mah & Ford-Jones, 2012). These life changes may lead to more pronounced CBPs as a child’s identity moves away from their association with their parental figures (Dubois-Comtois et al., 2013; Mah & Ford-Jones, 2012). The literature suggests that as many as 48 % of children in middle childhood may experience at least one externalizing and/or internalizing behavioral problem during this development period (Willner, Gatzke-Kopp & Bray, 2016).

Children in middle childhood who experience externalizing behaviors are more likely to experience social skill deficits, violence perpetration, frustration intolerance, and lower academic

performance (Dubois-Comtois et al., 2013; D’urso & Symonds, 2022). Additionally, children in middle childhood with internalizing behaviors are more likely to report having less peer socialization, school demand maladjustment, and incidents of self-harm behaviors (Arslan et al., 2021; Parasurman et al., 2020). Estimates show that around 10% of children in middle childhood report feeling sad or depressed in the last year (Garber & Roa, 2014). However, other research suggests that these statistics may be low as internalizing behaviors are less likely to receive adult intervention as these behaviors do not lead to as much social disruption as externalizing behaviors (Garber & Roa, 2014).

Longitudinal research following children have found that middle childhood CBPs can predict adolescent CBPs (Peterson et al., 2015). One of the theories used to describe this causation is cumulative continuity, or how individual temperaments that influence behaviors channel people into environments that perpetuate their behavioral tendencies (Mann, DeYoung, & Kreuger, 2021). As such, children with CBPs in middle childhood may be more likely to attract social environments, such as peer groups, that may reinforce problematic behaviors into adolescence (Gutman, Josi, & Schoon, 2019). For example, a meta-analysis of over 1400 studies examining adolescence found that adolescents who engaged in more rumination during middle childhood were more likely to seek out peers that also struggle with anxiety as they matured. Consequently, the review found that adolescents who engage in co-rumination with their friends reported an increase in those negative emotions overtime (Watling & Veenstra, 2021).

Stanley G. Hall, the founder of adolescent science, described adolescence as a physical and psychosocial “rebirth” between childhood and adulthood (Hall, 1904). Contemporarily, adolescence is the developmental period between 13-18 years old, associated with significant physical changes that often collide with the budding identity development that is the hallmark of

the age (Erikson, 1963; Waterman, 1982). The stress related to this developmental period often results in behavioral problems manifesting in new ways (Olsson et al., 2012). For instance, externalizing behaviors in adolescence may move away from physical aggression to behaviors like substance use (Peterson et al., 2015). A report by Acheson in 2020 found that adolescents who scored significantly higher on impulsivity (a common trait amongst teens presenting with externalizing behaviors) were more likely to experience alcohol misuse than their same-aged peers scoring low on impulsive traits. Relatedly, adolescent externalizing behaviors correlate with delinquency, delayed graduation, and expulsion from school (McLeod, Uemura, & Rohrman, 2012).

Internalizing behaviors are also on the rise during adolescence. A multi-cultural review in 2021 found that internalizing symptoms (e.g., anxiety, depression) increased over three years for over 500 early adolescents (13-15 years-old) (Lunetti et al., 2022). The research indicated that generally higher emotionality at this age and the increase in adolescent males reporting more internalizing symptoms (i.e., anxiety and depression) accounted for the significant rise of these symptoms during this period (Lunetti et al., 2021). The literature has similarly found evidence that adolescents with internalizing behaviors have more difficulty with interpersonal relationships, peer rejection, and social anxiety (Nelson et al., 2007).

As helpful as temperament theories are to understanding middle childhood and adolescent CBPs, the maternal characteristic of aggravation in parenting also plays a significant role in the development of child behavioral problems (Forns, Abad, & Kirchner, 2018). For example, a study reviewing the National Survey of Children's Health (2016) found that aggravation in parenting had a larger direct effect on adolescent maladjustment than an

adolescent's Adverse Childhood Experiences (ACES) score, seen as the prominent measure of mental health outcomes among children (Suh & Luther, 2020).

Aggravation in Parenting

Aggravation in parenting (parental stress) is defined by the anxieties, frustrations, and negative feelings associated with the demands of parenting (McBride, 1991). Aggravation in parenting can reduce positive parenting behaviors, such as mutual communication, physical affection, and unconditional regard (Lansford, 2011). Studies have cited that aggravation in parenting can lead to more authoritarian parenting practices (e.g., strict discipline practices) leading to higher levels of CBPs in middle childhood and adolescence due to the lack of personal control on the part of the child. (Lansford et al., 2011). A cross-lagged analysis following children (10.5-12.5) with CBPs in middle childhood found that maternal reduction in positive parenting behaviors predicted higher externalizing behaviors in later adolescence (13.5-16.5) (Serbin et al., 2015). At the more severe end of the spectrum, aggravation in parenting may induce abuse behaviors, such as child neglect, that have long-term consequences for the child, including a higher risk for physical, mental, and interpersonal issues in later adulthood (Marcal, 2021).

Furthermore, the literature indicates that children's CBPs can also influence aggravation in parenting levels (Deater-Deckard, 1998). Higher levels of externalizing/internalizing behaviors in children are associated with mothers increased psychological distress (Kochanova et al., 2022). Other research has shown that CBPs are correlated with higher maternal depression, understood partly by a mother's feelings of "failure" for any negative feelings toward their child (Kochanova et al., 2022). Withdrawal from mother-child interactions due to aggravation in

parenting correlated with higher depression symptoms in mothers (Garai et al., 2009). Overall, understanding the bidirectional effects of CBPs and aggravation in parenting is useful considering how individual characteristics influences mother-child relationship closeness (Thompson & Henrich, 2022).

Mother-Child Relationship

Closeness between Mother-child relationship describes how each person shows trust, intimacy, and interdependence within the dyad (Yan et al., 2019). Behaviors associated with close mother-child dyads include affective responsiveness, meaningful engagement, acceptance, and affection (Laursen & Collins, 2009; Yan et al., 2019). As the child reaches middle childhood and adolescence, the closeness between mothers and children may shift as children reach for more independence from their parental figures (Smetana et al., 2006). However, mothers often maintain an influential role in their children's lives, and the closeness of the relationship has a significant impact during these developmental periods (Larsen et al., 2000).

A literature review found that close mother-child relationships in middle childhood are associated with higher school performance, psychological wellbeing (less depression and anxiety), and less risk-taking behaviors (Branje et al., 2010). These positive outcomes were found regardless of the child's gender identity. Mother-child relationship closeness is also important due to its influence on the dyad's closeness overtime. A longitudinal study by Birkeland et al. (2012) found that the mother-child relationship in middle childhood was predictive of future closeness in adolescence. Adolescent self-esteem and self-worth correlated with closer maternal relationships (McAdams et al., 2017). Mothers also see a benefit of a close relationship with their adolescents. Mothers with adolescents who more routinely disclosed

sensitive information reported more confidence in giving their children more independence (Branje, 2018). Another reason why a strong relationship between mother-child is essential is the role of conflict resolution. The literature has found that conflict between mothers and children is normal, but the dyad's response to conflict can have crucial effects (Reed et al., 1996). The tactics that mother-child dyads utilize to respond to conflict often become the child's template on how to manage conflict in future relationships (Branje, 2018). In a longitudinal study of 145 young adults, the participants who expressed closeness with their mothers, despite a rise in conflicts adolescence, reported more intimate relationships in emerging adulthood (Seiffge-Krenke et al., 2010).

As the mother-child relationship is essential, there are many theories of how the relationship develops over time. Socioecological theories, such as Urie Bronfenbrenner's Ecological System Model, emphasize that the mother-child relationship does not develop in a vacuum, meaning there are greater social forces that play a role in shaping the relationship.

Urie Bronfenbrenner's Ecological Systems Model (ESM) surmised that human development was caused by a 'transactional influence' between an individual's characteristics and the environmental context, with both spheres influencing one another to affect development outcomes (Bronfenbrenner, 1979). In the case of the mother-child relationship, the ESM surmised that the relationship between the mother-child was transactional in nature, meaning the child's characteristics influenced the parents' characteristics and vice versa, as well as emphasizing how the social context around the relationship affects these transactions (Erikson, 2018). According to Bronfenbrenner, the social context could be the physical environment surrounding the mother and child, such as a geographical location, or the perceived social support or stress placed on the family unit (Erikson et al., 2018). Bronfenbrenner's inclusion of

the role of social support and stress later inspired new theories based on his original conceptualization, notably, Belsky's Parenting Process model (Belsky, 1984; Errikson et al., 2018).

Social Support

Jay Belsky developed the Parenting Process Model when social science shifted from the traditional psychoanalytic perspective of human development to more socioecological theories that attempted to understand how the social environment (i.e., social support and stress) affected functioning (Cohen, 2004). According to the Parenting Process Model, parental functioning is multidetermined by a) the child's characteristics, b) the parent's characteristics, and c) the social context of parental stress and support. Belsky first developed the model as a socioecological explanation of child abuse, but the utility of the model helped expand Belsky's original idea to help explain how parental functioning affected parental behaviors more generally (Choi & Pyun, 2014). When viewing maternal functioning through the Parenting Process model, maternal aggravation in parenting (mother's characteristics) and child behavioral problems (child's characteristics) interact with one another in the context of maternal stress and support to influence maternal functioning (Belsky, 1984). As such, negative mother-child interactions with a lack of social support can decrease maternal functioning, resulting in negative parenting behaviors that have a negative cascading effect on child behaviors and the mother-child relationship. However, the model posits that maternal social support may act as a "buffer" or moderator against maternal stress that can bolster maternal functioning, positively affecting child behaviors and the mother-child relationship (Belsky, 1984; Cohen, 2004).

As a multifaceted construct, the literature describes social support as the information or actions of others that lead an individual to feel cared for and foster communication and mutual obligation in a social community (Hupcey, 1998). As the literature on social support has expanded, researchers categorized social support based on structure and function. *Structure* refers to social networks or the specific set of interconnected people anchored within an individual's life (Borstein, 2002). Often, people in a mother's social network provide different types of social support that can vary in *function*, or the type of social support, whether actual or perceived, that an individual receives from their social networks (Shakespeare-Finch & Obst, 2011). However, the varying functions of maternal social support types often become lost in the literature when all social support types are collapsed into one category. For this study, three maternal social support types, instrumental, emotional, and policy, are discussed regarding their unique functions regarding aggravation in parenting, CBPs, and the mother-child relationship.

Maternal Instrumental Social Support

Instrumental social support is the tangible resources an individual receives from their social circle (Schulz et al., 2022). Often defined through action-based services, instrumental social support may include economic support, transportation, medical care, or meal preparation (Schulz et al., 2022; Semmer et al., 2008). Maternal instrumental support resources have been found to benefit maternal functioning by lowering maternal aggravation in parenting and maintaining maternal wellbeing (Cardosco, Padilla, & Sampson, 2010). A study following mothers with children over ten years found that instrumental support mediated the association between housing insecurity and maternal depression (Marcal, 2021). Specifically, mothers with

access to instrumental support to gain appropriate housing (i.e., staying in someone's home) reported lower maternal depression than women who did not have those resources. The findings also found that maternal instrumental support correlated with better child functioning (Marcal, 2021). From a socioecological perspective, maternal instrumental support may have a coping role for mothers, particularly low resourced mothers, that may have little access to social safety net programs (Cardosco, Padilla, & Sampson, 2010; Marcal, 2021).

Instrumental social support may also benefit children in middle childhood and adolescence who are struggling with CBPs. The Family Stress Model (FSM; Hill, 1958; McConnell et al., 2010) theorizes that familial socioeconomic strain affects children by increasing parental stress (Gard et al., 2020). Children may respond to the increase in parental stress by increasing problematic behaviors that place more demands on mothers to adapt to the new behaviors, which exacerbates preexisting stress (Gard et al., 2020). Consequently, the mother-child relationship may suffer as the interpersonal interactions between the pair become more negative, creating a vicious cycle (McConnell et al., 2010). Maternal instrumental social support can help stop this cycle by lowering the stress in one domain of a mother's life (e.g., a friend completing household chores, or a financial loan), leading to a decrease in maternal stress that can have positive effects on a child's CBPs (Thotis, 1995; 2011).

Although maternal instrumental support is highly valuable to mother-child functioning, as stated earlier, mothers may have different people in their social networks that provide social support with different functions. For example, the person who provides a mother with tangible resources may not be the individual a mother turns to for comfort or advice. As such, maternal emotional support also provides vital functions that can affect maternal functioning.

Maternal Emotional Social Support

Emotional support is defined by “the verbal and nonverbal processes by which one communicates care and concern for another, offering reassurance, empathy, comfort, and acceptance” (Bloom, 1990). Evidence suggests that emotional support systems can encourage mothers, boost maternal confidence, and help lessen mother’s anxieties (Thomas, 2017).

Maternal sources of emotional support are an important part of social embeddedness that is helpful for mothers to adapt to their child’s CBPs in middle childhood and adolescence. For instance, an in-home study of 32 non-clinical mother-child dyads found that pro-social interactions between mothers and children in middle childhood (12-years-old) with externalizing behaviors increased when mothers reported interactions with someone that offered emotional support (Szykula et al., 1991). Additionally, evidence suggests that maternal sources of emotional support play a role in shaping how mothers view CBPs (Luster, 1993). Sources of emotional support may provide a mother with a perspective on what to expect from developing children and how to respond effectively within a mother’s cultural or social mores (Luster, 1993).

Moreover, maternal sources of emotional support may provide positive outlets for mothers to regulate their emotions (Morris et al., 2017). These outlets are important as evidence shows that maternal emotional dysregulation is one of the main mechanisms that drive CBPs in middle childhood and adolescence (Cao et al., 2017). For instance, two separate longitudinal studies found that, although child characteristics were more influential on internalizing behaviors in middle childhood, maternal internalizing behaviors (i.e., depression → not getting out of bed) had a greater influence in the development of internalizing behaviors during adolescence (Landford, 2018).

Having a safe space to vent emotions allows mothers to model emotional regulation around their children that help to bolster the mother-child relationship. (Soenens et al., 2007). Similarly, children in middle childhood and adolescence with more effective regulation skills are less likely to exhibit severe behavioral problems that help decrease maternal stress (Crandall et al., 2015).

Single mothers also benefit from strong emotional support from family and peers that have positive effects on adolescent functioning (Zhou & Taylor, 2022). Adolescents with single mothers who reported higher perceived emotional support had higher social competency, school engagement, and lower externalizing behaviors than single mothers with lower perceived emotional support (Taylor & Conger, 2017). The impact of a mother's emotional support on adolescents held when controlling for gender, race, and socioeconomic status (Taylor & Conger, 2017). Thus far, the maternal social support types discussed have leaned heavily on the mother's immediate social network. However, another social support type for mothers outside of their immediate social networks is policy social support.

Maternal Policy Social Support

According to the Social Determinants of Health literature, 'upstream' structures (e.g., government agencies) impact public health through 'downstream' effects (e.g., social safety net programs) that impact the health of families (Braveman et al., 2011; Palmer et al., 2019). Examples of government assistance that helps families include food assistance, unemployment benefits, income-based housing, and medical insurance. Under-resourced mothers with children are at higher risk for greater psychological and physical health problems that have inter-generational effects (Hulme et al., 2001). Notably, a lack of resources influences maternal aggravation in parenting and CBPs. For instance, Dush (2019) found that children (11-18)

experiencing food insecurity were more likely to have externalizing and internalizing behaviors and increased peer conflict. One of the theories to explain this association is the indirect effect of lowered attentional focus and inhibitory control via maternal stress (e.g., aggravation in parenting) (Gee & Aims, 2019). Evidence has established that policy support is vital when other maternal social supports are not enough to fill resource gaps for lower income families (Wu & Eamon, 2010). Like other types of social support, receiving policy support may bolster a mother's psychological functioning that allows buffering against the stress related to economic vulnerability (Kaiser et al., 2017).

The benefits of maternal policy social support on maternal functioning are evident from the research on families receiving federal policy support. Gassman-Pines and Hill (2013) wrote a meta-analysis on the literature studying the impact on familial functioning after the passing of the Earned Income Tax Credit (EITC) in 1996. Information gathered from the meta-analysis found that mothers receiving EITC saw an increase in participation in the labor force and child poverty decreased by 16 % by 2003 (Gassman-Pines & Hill, 2013). The psychological relief that comes with consistent family resources also helps to decrease childhood anxieties that has a positive effect on behavioral problems for children in middle childhood and adolescence (CDC, 2020). Maternal policy social supports also have positive benefits on the mother-child relationship closeness. A 2017 meta-analysis found that mothers receiving EITC reported an increase in positive mother-child interactions correlated with the decline in maternal stress (Peterman, 2017).

Other types of policy support have similar benefits in the association between aggravation in parenting, CBPs, and the mother-child relationship. For example, there is substantial evidence that food insecurity, or the limited availability of nutritionally adequate and

safe foods, is linked to a higher probability of maternal depression (Munger et al., 2016). One of the main policies to help families at risk for food insecurity is the Supplemental Nutrition Assistance Program (SNAP). Longitudinal research following mothers receiving or not receiving SNAP benefits indicated that mothers on SNAP benefits had a lower probability of depression after two-years (Munger et al., 2016). Lowering maternal depression has long been associated with lower probability of middle childhood and adolescent internalizing symptoms and less behavioral problems over time (Wolf et al., 2017). One of the theories underlining why maternal policy social supports have dual benefits for mothers and children is that mothers with federal or state assistance have more psychological resources to focus on behavioral problems exhibited by their children in middle childhood and adolescence (Conger & Conger, 2002).

Although policy support has been a positive force in many mother-child dyads, these programs diverge from other forms of social support networks in two ways. First, applying and receiving policy support as a mother with children comes with societal stigma that can negatively affect maternal functioning (Lapham & Martinson, 2022). Secondly, policy support is not evenly distributed amongst states, meaning that some mothers, more often mothers of color, do not receive the same benefits depending on where they live in the United States (Lapham & Martson, 2022). These types of drawbacks of social support are not unique to policy support (Luster, 1993). All types of maternal social support have both pros and cons, which has been challenging to parcel out within the social support literature (Thompson & Henrich, 2022). Nevertheless, the evidence overwhelming shows the benefits of maternal social support in the lives of mothers and their children.

Rationale for the Current Study

The transactional relationship between mother- child may be most pronounced during the development stages of middle childhood and adolescence when child behavioral problems (CBPs) become more complex (Sigfusdottir et al., 2017). Belsky's Parenting Process model provides a helpful framework in understanding how mother-child characteristics and maternal stress and support interact to determine maternal and child functioning. The Parenting Process model and social support literature have well documented the benefits of maternal social support; however, the literature often focuses on one type of support or collapses all support types into one broad category. Although social support types are inherently connected, this lack of complexity leaves questions on whether different types of social support (instrumental, policy, and emotional) have unique longitudinal associations with aggravation in parenting, CBPs, and the mother-child relationship overtime. Additionally, it is unclear whether Belsky's Parenting Process model applies similarly across different types of maternal social support. Therefore, the aims of the present study are as follows:

1. Utilize Confirmatory Factor Analysis (CFA) to create and determine measurement structures for maternal instrumental, policy, and emotional social support-
2. to understand whether different types of maternal social supports (instrumental, policy, and emotional) have unique associations between aggravation in parenting, child behavioral problems, and the mother-child relationship overtime, and-
3. to understand whether Belsky's Parenting Process model applies across different types of social support types.

The study will use Wave 5-6 data (T1 and T2, respectively) from the Future of Families and Child Wellbeing Study (FFCW) to create separate cross-lagged path analyses to evaluate the

longitudinal associations between maternal social support (measured separately by instrumental, emotional, and policy), maternal aggravation in parenting, CBPs, and the mother-child relationship within middle childhood and adolescence. Based on the Parenting Process model and the theoretical evidence, it is hypothesized:

1. There will be a correlation between maternal social support (measured separately by instrumental, emotional and policy), aggravation in parenting, child behavioral problems, and the mother-child relationship at T1.
 - 1a. There will be a correlation between maternal social support, aggravation in parenting, and child behavioral problems, and the mother-child relationship at T2.
2. There will be a direct association between each variable from T1 to T2.
3. There will be a direct association between social support (measured separately by instrumental, emotional, and policy) at T1 and aggravation in parenting at T2.
 - 3a. There will be a direct association between social support (measured separately by individual instrumental, emotional, and policy) at T1 and child behavioral problems in T2.
 - 3b. There will be a direct association between social support (measured separately by instrumental, emotional, and policy) at T1 and the mother-child relationship at T2.

Additional Analyses

As the literature review noted, studies have shown that the variables of aggravation in parenting, CBPs, and the mother-child relationship have significant relationships with one another. Although the study is primarily focused on understanding the role of maternal social, the use of a cross-lagged path analysis for hypothesis testing allows for the possibility to gain more insight about the associations between the study's three other variables. Therefore, additional

analyses will provide further findings regarding the associations between maternal social support types, aggravation in parenting, CBPs, and the mother-child relationship.

Chapter Two

Methodology

Procedures

The Future Families and Child Wellbeing Study (FFCW) is a longitudinal birth cohort studying approximately 4700 children (characterized as the “focal” child in the study) born between 1998-2000 from 20 major cities (city population <200,000) (Reichman et al., 2001). The project’s original purpose was to gather information on unwed couples with young children. Researchers conducted baseline interviews at the hospital where the mothers gave birth. The core study consists of interviews with biological mothers, biological fathers, or primary caregivers at birth and again when the focal children were one, three, five, nine, and fifteen. The caregiver interviews collected information on “attitudes, relationships, parenting behavior, demographic characteristics, health (mental and physical), economic and employment status, neighborhood characteristics, and government program participation (Reichman et al., 2001).” Later interviews were completed via phone interviews and in-home studies starting when the focal children were five- years -old. Child interviews starting at age 9 included questions on school engagement, development, health, and interpersonal relationships.

Participants

Recruitment for the FFCW utilized a stratified, multistage sampling strategy from 20 major cities randomly assigned as recruitment sites. Importantly, due to emphasis of the study (unwed parents and their children), there was an oversample of unwed mothers, racial minority identities, and low-income parents (Reichman et al., 2001). The total sample size of the project at baseline was (N= 4,898), including 3722 unwed couples and 1175 married couples. For this study, the

researcher utilized data collected from mothers and children from Wave 5 (2007-2010) and Wave 6 (2014-2017) when the focal children were 9-years-old and 15-years-old, respectively. The researcher refers to Wave 5 as Time 1 (T1) and Wave 6 as Time 2 (T2) moving forward. Preliminary descriptive statistics concluded that 93% of primary caregivers interviewed in both waves were biological mothers, meaning children lived with their biological mother all or most of the time. Participation total after identifying appropriate mother-child dyads yielded (N=3,272) in T1 and (N=3,287) in T2.

Measures

Demographics. Demographic information includes self-report responses including focal child's gender, maternal age, maternal race/ethnicity, relationship status, educational attainment, and income.

Maternal Social Support

Maternal Instrumental Social Support. Items to create the measurement structure for maternal instrumental social support were determined by analyzing questions from the T1 and T2 mothers' interview relating to the extent that a mother received instrumental social support in the last year. Example questions for maternal instrumental social support included, "*If you needed a \$200.00 loan in the next year, do you have someone that could give you a loan?*". Each item utilized to create the measurement structure for instrumental social support was scored using dichotomous variables (yes/no), indicating the presence or absence of that resource. A confirmatory factor analysis (process described below) assessed the degree to which items selected were appropriate to assess the factor of maternal instrumental social support. (See Figure 1 to see all questions that were utilized in the Confirmatory Factor Analyses for maternal instrumental social support).

Maternal Policy Social Support. Items to create the measurement structure for maternal policy social support were determined by analyzing questions from the T1 and T2 mothers' interview relating the extent to which mother participants were receiving state or federal government assistance, including income-based housing assistance/utility assistance, childcare, Medicaid/Medicare, SNAP, TANF, or social security. Example questions for maternal policy social support included, "*Is the local, state, or federal government helping pay rent?*." Each item deemed appropriate for policy social support was scored using dichotomous variables (yes/no), indicating the presence or absence of different types of government or state assistance in the last year. A confirmatory factor analysis (process described below) assessed the degree to which items selected were appropriate to assess the factor of maternal policy social support. (See Figure 2 to see all questions that were utilized in the Confirmatory Factor Analysis for maternal policy social support)

Maternal Emotional Social Support. Items to create the measurement structure for maternal emotional social support were determined by analyzing questions from the T1 and T2 mothers' interviews relating to the extent that a mother received emotional support from her social network. An example question included, "*mother has a special person mother feels close to and can depend on?*." Each item was scored using a dichotomous variable (yes/no), indicating the presence or absence of different types of emotional support in the last year. A confirmatory factor analysis (process described below) assessed the degree to which items selected were appropriate to assess the factor of emotional social support. (See Figure 3 to see all questions that were utilized in the Confirmatory Factor Analyses).

Child Behavioral Problems. The Child Behavior Checklist (CBCL-6-18; Achenbach, 1992) is a 113- item caregiver measure to assess emotional, behavioral, and social problems in children and

adolescents (ages 6-18). The CBCL was designed with nine subscales, including anxious-depressed, withdrawn, somatic complaints, social problems, thought problems, attention problems, rule-breaking and aggressive behaviors. Example items included, “*Child cries a lot,*” and “*Child gets in many fights.*” A 3-point Likert scale from 1 (Not True) to 3 (Very True or Often true) indicated the extent to which the caregiver believed that the child showed or participated in the behavioral problem. The sum of the subscales determined the total CBCL score. The psychometric properties of the CBCL produced a strong Cronbach Alpha of (.95). As T2 data only reported scores from the behavioral, emotional, and social problems subscales, the measurement for CBPs for T1 and T2 only utilized the sum of these subscales to keep the measurement consistent across timepoints (See Figure 4 for CBCL questions utilized in the analysis).

Aggravation in Parenting. The Panel Study of Income Dynamics (PSID-CDS; Hofferth et al., 1997) is a 5-item supplemental measure to assess a mother’s level of parental stress and the mother’s perceptions of themselves as a parent. For example, an expected question included, “*I often feel tired, worn out, or exhausted by raising a family.*” A 4-point Likert scale from 1 (strongly agree) to 4 (strongly disagree) calculated the degree to which a mother agreed with each item. The sum of each item divided by 4 calculated the overall aggravation in parenting score. Psychometric properties of the PSID-CDS included a Cronbach Alpha of (.69) (See Figure 5 for all aggravation in parenting questions utilized in the analysis).

Mother- Child Relationship. Questions related to the mother-child relationship were originally pulled from The Family Functioning and the Middle Childhood and Adolescent sections from the National Survey of Child Health (2003). The self-report 4-point Likert scale measured the

closeness of the mother-child, where 1(extremely close or extremely well) and 4 (not very close and not very well).

Control Variables

Maternal Health Status. The literature indicated that maternal health status has major influences on child behavioral problems and the mother-child relationship (Garbarski, 2014). The question “*In general, how would you rate your overall health?*” measured the mother’s self-reported assessment of their health for T1 and T2. The item is score by a 5-point Likert scale from 1 (excellent) to 5 (poor).

Child Health Status. Evidence suggested that child health status was multidetermined through cumulative risk, or the interplay between a child’s genetic predispositions, their environment, and parental health status (Garbarski, 2014). Greater issues with a child’s health can create even more parental stress (Garbarski, 2014). Child health status was determined by mother’s self-reported answer to the question; “*In general, how would you rate your child’s overall health?*” The item was scored by a 5-point Likert scale from 1 (excellent) to 5 (poor).

Maternal Relationship Status. There are social support advantages for mothers that are married or partnered. Therefore, the researcher controlled maternal relationship status to ensure the study was not only measuring the effects of relationship status. Maternal relationship status was measured by the answers to the follow questions; “*What is your relationship with child’s biological father?,*” and “*Are you currently in a romantic relationship with someone else rather than biological father?*” A 6-point Likert from 1(married) to 6 (just friends) measured the former, and a dichotomous yes/no scale measured the latter.

Maternal Depression. Depression is one of the most common mental health disorders, especially for self-identified women in their childbearing years (Shaw et al., 2009). Evidence has linked

maternal depression to an increase in internalizing disorders amongst children and adolescents, leading to difficulties in the mother-child relationship (Heser et al., 2015). Although social support was a protective factor against depression, maternal symptoms of depression may have adverse effects on a mother's social relationships due to the withdrawal often experienced with the diagnosis (Garipey et al., 2016). Relatedly, there are structural inequities regarding mental health services which disproportionately effects mothers from marginalized communities (Crear-Perry et al., 2021).

From the original FFCW study, the presence or absence of maternal depression was determined by the Composite International Diagnostic Interview, Short Form (CIDI-SF) (CIDI-SF; Kessler et al., 1998). The CIDI-SF is a stem-branch questionnaire with 29 initial probe questions and 56 secondary questions designed by the World Health Organization for assessing symptoms of Major Depression outlined by the DSM-IV over the last 12 months. Psychometric evaluation for the CIDI-SF for Major Depression produced a Cronbach Alpha is .89, indicating high internal consistency. Stem questions asked respondents whether they had feelings of dysphoria (depression) or anhedonia (lack of pleasure) in the past year that lasted for two weeks or more and, if so, whether the symptoms lasted most of the day. If the mother answered in the affirmative, the mother answered the following questions about 1) losing interest, 2) feeling tired, 3) change in weight, 4) trouble sleeping, 5) trouble concentrating, 6) feeling worthless, and 7) thinking about death. The scores from the first 8 questions of the CIDI-SF (questions related to major depression) for each participant were averaged to control for maternal depression in T1 and T2.

Data Analytic Plan

Little's Missing Completely at Random Test (MCAR) analyzed the missing data for T1 and T2 using SPSS V.29 (Little, 1998). Little's MCAR tests the null hypothesis that missing variables are Missing Completely at Random (MCAR), or that there is no relationship between the "missingness" of the data. According to Little, a p-value greater than .05 indicates that the researcher fails to reject the null hypothesis, meaning that the missing values are Missing Completely at Random (MCAR). Conversely, if the p-value is less than .05, the researcher would reject the null hypothesis, indicating that missing values are Not Missing at Random (NMAR), or that there are systematic issues related to the missing values (Staudt et al., 2022). NMAR places doubt on the results received from the data as it biases the population estimates towards the characteristics of participants who completed the full study. If necessary, Full information maximum likelihood (FIML) in Mplus would address NMAR data in the later analyses. Post Little's analysis determined descriptive statistics, means, standard deviations, and bivariate correlations amongst the study's variables. The bivariate correlation matrix determined the extent of multicollinearity within the variables. Bivariate correlation totaling $r = .85$ and above indicates multicollinearity (Kline, 2005). If multicollinearity exists, the next step was to remove the specific variable or combine (e.g., average) items with multicollinearity issues (Weston & Gore, 2006).

The researcher utilized Mplus (V.8) for all the study's initial measurement structure analyses and hypothesis testing (Muthén & Muthén, 2017). To satisfy the assumptions of normality, the researcher utilized Royston's (1995) and Mardia's Skewness tests (1970). Royston's test of univariate normality required a p-value greater than .05 to conclude a normal distribution (Kim, 2013). For Mardia's test, a skewness value larger than 2 or smaller than -2 or a

kurtosis value larger than 7 or smaller than -7 indicated non-normal multivariate distribution (Kim, 2013). If certain variables violate tests of normality, Maximum Likelihood Robust estimator corrector (MLR) in the Mplus system addressed issues with non-normality as the estimator was more sensitive to non-normality compared to the typical Maximum Likelihood estimator (Muthén & Muthén, 2017).

As the FFCW study provided no formal scales that measured the maternal social support types of interest (instrumental, policy, emotional), the first aim of the study was to determine and create three measurement structures. Thus, three Confirmatory Factor Analysis (CFA) were deployed to assess the factor structure for each social support type to ensure construct validity of the items outlined in the measurement section before hypothesis testing. Confirmatory Factor analysis (CFA) is a statistical technique that utilizes apriori knowledge to create a model that assesses for the latent or unobserved factors that underlines the relationship between items of interest (Bryne, 2012). CFAs are most often used to ensure construct validity when designing a measure for a certain factor (Bryne, 2012) (See Figure 6 for CFA example)

The CFA analyses were run utilizing the standard oblique rotation in Mplus. The reasoning for this type of rotation is that the items analyzed would likely be conceptually related within an CFA model (Muthén & Muthén, 2017). Maximum Likelihood Estimator (MLR) was utilized to address non-normality of the data. The researcher conducted CFAs for both T1 and T2 to ensure the measurement structures were consistent across both times points. Notably, although the researcher documented both T1 and T2 CFA findings, only T1 findings were explicitly discussed in the results section.

Model-of-fit indices, including the Chi-Square Fit Test, Tucker-Lewis Index (TLI), Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA),

measured whether the hypothesized model is adequate fit for the data. A TLI and CFI value exceeding .95 and a RMSEA value between 0.05-0.08 concluded model fit (Kline, 2005).

Importantly, the Chi-Square test is highly sensitive to large sample size, meaning that the study's sample size was more likely to produce a clinically significant Chi-Square (Bryne, 2012). Thus, the tables outlining the study's results reported the Chi-Square test, but the researcher did not utilize the findings to assess model fit.

To assess the individual items, factor loading scores of $>.4$ or higher indicated items that underlined with the factor in question. Items with a factor loading of less than $<.03$ were removed from the item list (Stevens, 1992). Lastly, inter-item reliability and Cronbach Alpha analyses were run to ensure measurement reliability to complete the measurement structure analysis for each maternal social support type.

Initial CFA models for each maternal social support (instrumental, policy, and emotional) were not acceptable fits for the data. Thus, the researcher deployed Exploratory Factor Analysis (EFA). EFAs are a statistical technique commonly used before CFAs to determine the number of underlining factors there are between items of interest and which items fall under which factor (Bryne, 2012).

To determine the number of underlying factors for each social support (instrumental, policy, and emotional) type, the researcher assessed the eigenvalues. Eigenvalues are a measure of variance explained by a single factor (Crawford et al., 2010). Factors with eigenvalues >1.00 was retained for further analysis (Crawford et al., 2010.) and were utilized in the second round of CFAs before hypothesis testing. Notably, the researcher documented the EFA findings for both T1 and T2, but the researcher only explicitly discussed T1 findings in the results section.

Hypothesis Testing

Cross-lagged path analysis evaluated the study's hypotheses and additional analyses. Cross-lagged path analysis aims to estimate the directional associations that variables have on one another overtime (Bryne, 2012; Kenney, 1975). In this type of model, variances in outcomes are derived from three sources: the correlation of variances at concurrent timepoints, the effects of the same variable at an earlier time-point (autoregressive path), the effect of another variable at the proceeding time-point (cross-lagged path).

To test Hypotheses 1-1a, each variable was correlated with the other variables at T1 and T2. To test Hypothesis 2, each variable at T1 was regressed on itself at T2. Lastly, to test Hypothesis 3-3B, each variable at T1 was regressed on the proceeding variables at T2. Acceptable hypothesized model included RMSEA values between 0.05- 0.08 and CFI and TLI values ≥ 0.95 (Marsh et al., 2005) (See Figure 7 for Cross-lagged Path Model Example).

Chapter Three

Results

Descriptive Statistics

The original baseline sample included (N= 4898) biological mothers with 47.6 percent identified as Black, Non-Hispanic, with an average age of 26.8. At the time of the focal child's birth, 76% of the mothers interviewed were unmarried. The baseline sample included 60% of mothers with a high school equivalent or some college education with the average income just under \$11,000. Lastly, within the baseline focal child sample, 47.8 identified as female (n=2,341) and 52.2 were identified as male (n=2,557). See Table 1 for Maternal Baseline Demographic information.

There were 201 mother-child dyads that were removed from the T1 & T2 subsample due to no data collected from either wave, cited by the researchers as having no further contact with the participants (Reichman, 2001). Overall, the participant number after removing missing participants from each wave resulted in (N=3079) for T1 and (N=3082) in T2.

The racial demographics for T1 included 50% of mothers identified as Black, non-Hispanic (n=1477), 26% identified as Hispanic (n= 800), 23% identified as White (n= 678), and 4% identified as Multiracial (n= 124). The average income for the T1 was approximately \$31,000 and 33% of mothers were married (n=1064). The T2 mother-child subsample was (N= 3,086) with the racial demographics revealing that 50% of mothers identified as Black, non-Hispanic (n=1,543), 25% identified as Hispanic (n=771), 22% identified as White (n=679), and 3% identified as Multiracial/Other (n=93). 56% of mothers (n=1728) were either married or cohabitating and 43% were unmarried (n=1,333).

Little's Missing Completely at Random Test (MCAR) was performed on T1 and T2. Before running the test, the researcher analyzed the datasets and found that values labeled as (-6) and (-7) indicated that questions were skipped or not answered during the interview. As Little's test only is looking "missing" values, the test did not compute these responses as missing. The researcher then replaced all values labeled as (-6) and (-7) to (-99) to indicate the missing values of the dataset. Overall, results from the MCAR ($X^2 = (13, N=6165) = .00, p = .10$) indicated that the researcher failed to reject the null hypothesis, meaning that the "missingness" of the data met the assumptions of MCAR.

Exploratory Factor Analysis Results

Maternal Instrumental Social Support.

The EFA results for T1 maternal instrumental social support indicated both a one-factor and two-factor model. The one-factor model comprised of 3 items with factor loadings from .60-.66 with an eigenvalue of 1.23, explaining 23% of the total variance. The two-factor model comprised of 3 items with factor loadings from .69-.81 with an eigenvalue of 2.01 that explained 38% of the total variance. Two items were subsequently removed from both models as neither factor loadings met the $<.4$ threshold (Please see Table 5 for more details).

Maternal Policy Social Support.

The EFA results for T1 maternal policy social support found a one-factor model with an eigenvalue of 2.99 which explained 78% of the overall variance. The one-factor was comprised of two items with factor loadings of .64 and .62, respectively (See Table 6 for more details).

Maternal Emotional Social Support.

The EFA results for T1 maternal emotional social support indicated both a one-factor and a two-factor model. The one-factor model had an eigenvalue of 1.87 which explained 40% of the total variance. The one-factor model comprised of two items with factor loadings of .78, and .74, respectively. The two-factor model had an eigenvalue of 1.00 explaining 33% of the overall variance comprised of one item with a factor loading of .96 (See Table 7).

Confirmatory Factor Analysis Results

Maternal Instrumental Social Support.

There were two factors underlining maternal instrumental social support. Regarding Factor 1, which includes Items 3, 5, and 6, it was determined that this factor fell under *Informal Instrumental Social Support*. This type of informal support would comprise of instrumental resources that a mother could access from her social network that did not require formal agreement to utilize these supports. It is also likely that the mother may rely more heavily on this type of support in daily life. This in contrast with Factor 2, *Formal Instrumental Social Support*, comprised of Items 4, 7, and 8, where the mother and the provider of the social support must be in a formal agreement with a third-party, such as a bank, for the mother to receive those resources. This type of instrumental social support may also rely on a stronger relationship between the mother and the provider of the support, as co-signing a loan has greater financial implications that would require more long-term commitment to the relationship. These findings are important as there is a lack of nuance when it comes to how to categorize maternal instrumental social support resources.

When reviewing the CFA results for maternal formal instrumental social support at T2 found that Item 4 (*Mother could count on someone to loan her \$1000 during the next year*) did not have a significant factor loading. To ensure that both timepoints remained consistent, Item 4 was removed from T1 and T2 and the analyses were run again to determine the fit indices for T1 and T2.

Overall, the hypothesized model for maternal informal instrumental social support, aggravation in parenting, CBPs, and the mother-child relationship was an acceptable fit for the data ($X^2(41) = 110.31, p < .001$; GFI = .97; TLI = .95; RMSEA = .02). The model for maternal formal instrumental social support and the other three variables was also an acceptable fit for the data ($X^2(41) = 95.10, p < .001$; GFI = .98; TLI = .96; RMSEA = .01). See Figure 8 for the illustration showing the two-factor model CFA model for maternal instrumental social support. The standardized factor loadings for the Items ranged from .61-.68 (See Table 8). The inter-item reliability for Informal and Formal instrumental social support factors ranged from .40-.60 (See Table 9) with a Cronbach Alpha of .70 (See Table 10). Please see Tables 11, 12, and 13 for the unstandardized/standardized factor loadings, inter-item reliability, and Cronbach Alpha for T2 maternal instrumental social supports.

Maternal Policy Social Support.

The measurement structure for maternal policy social support was more limited in scope in terms of items that loaded significantly on the factor. Nevertheless, the CFA did illuminate that TANF (Temporary Assistance for Needy Families) and SNAP (Supplemental Nutrition Assistance Program) were clearly important items that underlined the factor of maternal policy social support.

Overall, the hypothesized model for maternal policy social support, aggravation in parenting, CBPs, and the mother-child relationship was an acceptable fit for the data ($X^2(41) = 89.78$, $p < .001$; GFI = .97; TLI = .95; RMSEA = .02). See Figure 9 for the illustrative showing of the one-factor model CFA for maternal policy social support. Items 1 and 2 had standardized factor loadings of .98 and .46, respectively (see Table 14). The overall Cronbach Alpha was .90 (See Table 15). See Tables 15 & 16 for unstandardized/standardized factor loadings and Cronbach Alpha for T2 maternal policy social support.

Maternal Emotional Social Support.

Similar to instrumental social support, it was appropriate to determine the two underlying factors found in the two-factor model for maternal emotional social support. Factor 1, referred to as *Community Emotional Social Support*, comprised of Items 2 (*Mother has a special person mother feels close to and can depend on*) and 3 (*My religious faith is an important guide for my daily life*). In contrast, Factor 2, referred to as *Co-Parenting Emotional Social Support*, comprised of Item 1 (*Mother has a positive relationship with (biological father)*).

The CFA results for the two-factor model for T1 and T2 emotional social support indicated that neither had acceptable model-of-fit indices (See Table 17 and 18). Relatedly, the only Item that had a significant factor loading was Item 3 (*My religious faith is an important guide for my daily life*). A further Cronbach alpha analysis was conducted to assess whether there was internal consistency within the above items. The Cronbach alpha for T1 and T2 were .020 and .015, respectively. As there was poor internal consistency, it was determined to move forward with item 3. Results indicated that the hypothesized model for emotional social support (Item 3), aggravation in parenting, CBPs, and the mother-child relationship was an acceptable fit for the data ($X^2(41) = 76.40$, $p < .001$; RMSEA: .01; CFI:.98; TLI:.95).

After completing the measurement structure analyses, means, standard deviations, and bivariate correlations were analyzed. Item averages for instrumental and policy were utilized to aid in measuring the bivariate correlations amongst the data. The Pearson Correlation reflected low to moderate correlations amongst the variables (00-.78) with no correlations exceeding .85 (See Table 19). Rostyon's and Mardia's test analyzed for normality and skewness, respectively. The tests concluded that participants scores had a skewness range of (-0.36-1.74) and a kurtosis range of (-0.24-87.29). For both tests, the p-value was $<.0001$, indicating that the items did not meet the assumptions of normality. Therefore, the researcher deployed the Maximum Likelihood Robust Estimator Corrector (MLR) in the Mplus system to address non-normality (See Tables 20 & 21 for more details on Mean, SD, kurtosis/skewness for the Study's Principal and Control variables).

Hypothesis Testing

Hypothesis 1.

Hypothesis 1 posited that there would be a significant correlation between maternal social support (measured separately by instrumental, policy, and emotional), aggravation in parenting, CBPs, and the mother-child relationship at T1.

The results indicated a small but significant negative correlation between maternal informal instrumental social support and CBPs ($r(30) = -.01, p = .001$), meaning higher levels of informal social support correlated with lower levels of CBPs (See Table 20 for all correlations for maternal informal instrumental social support at T1). In contrast, there was no significant correlation between informal instrumental social support and aggravation in parenting ($r(30) = -.03, p = .48$), or the mother-child relationship ($r(30) = .01, p = .67$). Alternatively, there was a

significant positive correlation between maternal formal instrumental social support and aggravation in parenting ($r(30) = .10, p = .05$). Similarly, there was a small but significant negative correlation between formal instrumental social support and the mother-child relationship ($r(30) = -.07, p = .04$), meaning higher levels of formal instrumental social support correlated with lower closeness in the mother-child relationship. However, there was no significant correlation between formal instrumental social support and CBPs ($r(30) = .00, p = .87$). See Table 21 for all variable correlations for maternal formal instrumental social support at T1.

Moreover, results found that maternal policy social support had not significant correlations with the other three variables at T1 (See Table 22 for all maternal policy correlations at T1). Lastly, there was a significant negative correlation between maternal emotional social support and aggravation in parenting, indicating that higher levels of maternal emotional support correlated with lower levels of aggravation in parenting ($r(30) = -.06, p = .002$). There was also a positive correlation between emotional social support and CBPs ($r(30) = .03, p = .05$), as well as the mother-child relationship ($r(30) = .06, p = .001$) at T1 (See Table 23 for all correlations for emotional social support at T1). These results indicate that hypothesis 1 was partially supported.

Hypothesis 1a.

Hypothesis 1a posited that there would be a significant correlation between maternal social support (measured separately by instrumental, policy, and emotional), aggravation in parenting, CBPs, and the mother-child relationship at T2. According to the results, there were no significant correlations between informal, formal, or policy maternal social support and the other three variables (See Tables 24, 25, and 26 for all correlations for informal, formal, and policy

social support correlations at T2). There was a significant negative correlation between maternal emotional social support and aggravation in parenting at T1 ($r(30) = -.04, p = .02$). There were also significant positive correlations between emotional social support and CBPs ($r(30) = .05, p = .02$), as well as the mother-child relationship ($r(30) = .08, p = .00$) (see Table 27 for all correlations for emotional social support at T2). Thus, Hypothesis 1a was partially supported.

Hypothesis 2.

Hypothesis 2 posited that there would be a significant association (autoregressive path) between each variable from T1 to T2.

According to the results, there were no significant associations between T1 and T2 variables for either informal or formal instrumental social support cross-lagged path analyses (See Table 28 & 29 for additional details). However, for policy and emotional social support, there was a significant association between the mother-child relationship between T1 and T2, $\beta = (.05)$, $SE = .02$, $p = .01$), meaning that greater closeness from T1 was associated with greater closeness at T2 (See Table 30 and 31 for additional details). Thus, hypothesis 2 was partially supported.

Hypothesis 3

Hypothesis 3 posited that there would be a significant association (cross-lagged) between maternal social support (measured separately by instrumental, emotional, and policy) at T1 and aggravation in parenting at T2. Results from each cross-lagged analysis found no significant association between informal ($\beta = (.01)$, $SE = .02$, $p = .64$), formal T2 ($\beta = (-.02)$, $SE = .02$, $p =$

.35), policy ($\beta = (.01)$, $SE = .02$, $p = .40$), or emotional ($\beta = (.02)$, $SE = .02$, $p = .40$) social supports at T1 and aggravation in parenting at T2. Thus, hypothesis 3 was not supported.

Hypothesis 3a.

Hypothesis 3a posited that there would be a significant association between social support (measured separately by individual instrumental, emotional, and policy) at T1 and child behavioral problems in T2.

The results found for hypothesis 3a for maternal policy social support indicated that there was a positive association between maternal policy social support and CBPs ($\beta = (.03)$, $SE = .02$, $p = .007$). The finding indicated that higher levels of maternal policy social support at T1 was associated to higher CBPs at T2. Again, there was no significant cross-lagged association between informal ($\beta = (.00)$, $SE = .02$, $p = .89$), formal ($\beta = (-.01)$, $SE = .02$, $p = .81$), or emotional ($\beta = (.01)$, $SE = .02$, $p = .77$) social support at T1 and CBPs at T2. Thus, hypothesis 3a was partially supported.

Hypothesis 3b.

Hypothesis 3b posited that there will be a significant association between social support (measured separately by instrumental, emotional, and policy) at T1 and the mother-child relationship at T2.

Results from each cross-lagged analysis found that there was no significant association between informal ($\beta = (-.04)$, $SE = .03$, $p = .15$), formal ($\beta = (-.02)$, $SE = .02$, $p = .24$), policy ($\beta = (00)$, $SE = .00$, $p = .91$), or emotional ($\beta = (-.01)$, $SE = .02$, $p = .73$) social support at T1 and the mother-child relationship at T2. Thus, hypothesis 3b was not supported.

Results From Additional Analyses Results

When reviewing the results from Hypotheses 1-3b, there were further significant result that emerged between the relationships between maternal social supports, aggravation in parenting, CBPs, and the mother-child relationship.

Hypothesis 1 and 1a

Across the four cross-lagged path analyses at T1 and T2, there was a significant negative correlation between aggravation in parenting and the mother-child relationship, meaning that higher levels of aggravation in parenting correlated with lower closeness in the mother-child relationship, which mirrors the literature between the two variables. At T1, there was a pattern of non-significant results that was surprising based on prior literature. There was no significant correlation between aggravation in parenting and CBPs, as well as the CBPs and the mother-child relationship. In contrast, at T2, results found significant correlations amongst these variables. Across the four cross-lagged path analyses at T2, results showed that there was a significant negative correlation between aggravation in parenting and CBPs, indicating that higher levels of aggravation in parenting correlated with lower levels of CBPs. Relatedly, T2 found a significant positive correlation between CBPs and the mother-child relationship, meaning higher levels of CBPs correlated with higher closeness in the mother-child relationship.

Hypothesis 3

Although hypothesis 3 was not supported, additional findings found significant cross-lagged results regarding the effects of variables at T1 and aggravation in parenting at T2. Specifically, there were two models (policy and emotional) that showed a significant negative association

between the mother-child relationship and aggravation in parenting. The negative link indicated that greater closeness in the mother-child relationship at T1 was associated with lower levels of aggravation in parenting at T2, which was expected based on the literature and the Parenting Process model.

Hypothesis 3a

There were additional results across the different models (informal, formal, policy, and emotional) finding a significant positive association between the mother-child relationship and CBPs, indicating that greater closeness in the mother-child relationship at T1 was positively associated with higher CBPs at T2. Lastly, there was a significant negative association between CBPs and maternal policy social support, indicating that higher levels of CBPs at T1 were associated with lower levels of policy social support at T2 (See Tables 32-35 for complete cross-lagged path analyses for informal, formal, policy, and emotional social support types).

Chapter 4

Discussion

The bidirectional relationship between mother and child often becomes more complex as children reach middle -childhood and adolescence, when conflict begins to rise as children seek more independence from their parental figures (Sameroff & Mackenzie, 2003). Creating conditions that allow maternal functioning to flourish is vital in ensuring positive outcomes for maternal psychological health, child development, and the mother-child relationship (Crnic & Low, 2002). Socioecological theories, such as the Parenting Process model, theorizes the development of maternal functioning through the interplay between mother and child characteristics (aggravation in parenting and CPBs, respectively) within the context of maternal stress and support. Although the literature has shown that maternal social support has positive effects on maternal and child functioning, research has often focused on one type of support or conflates all social support types into one broad category.

Therefore, it is not well understood whether different types of social support have unique associations with aggravation in parenting, child behavioral problems (CBPs), and the mother-child relationship. Thus, the primary aims of the study included creating three measurement structures for the maternal social support types (instrumental, policy, and emotional), analyzing the unique affects that different types of maternal social support may have on the relationship between aggravation in parenting, CBPs, and the mother-child relationship, and to see whether the Parenting Process model applies across different maternal social supports.

Overall, the study results partially supported the stated hypotheses. Regarding hypothesis 1, there were correlation results that did fit what was expected based on the Parenting Process model. For instance, there were negative correlations between informal instrumental social

support and CBPs, as well as emotional social support and aggravation in parenting. However, other correlations found were not expected based on the Parenting Process model, such as the positive correlation between formal instrumental and emotional maternal social supports with CBPs at T1. The Parenting Process model would indicate that higher levels of formal instrumental and emotional support would increase maternal functioning, thus decreasing CBPs. These findings may indicate that the maternal stress that may motivate mothers to seek social support may still emotionally affect children's behaviors, particularly in middle-childhood when children depend more on their parents.

Furthermore, results found from hypothesis 1 also pointed to unique correlations between different social support types and the mother-child relationship. For example, maternal formal instrumental social support was negatively correlated with the mother-child relationship, whereas emotional social support positively correlated with the mother-child relationship. These different results indicate that these two social support types have varying effects on the mother-child relationship based on their function in the mother's life. For instance, if a mother receives formal instrumental social support, the mother may be dealing with multiple outside institutions to receive that support which may cause additional stress and time away from the family, negatively affecting the mother-child relationship.

In contrast, emotional social support, particularly of a religious or spiritual variety, may help mothers regulate their negative emotions around their child to model positive emotional regulation skills, meaning that the closeness of the mother-child could maintain despite difficult circumstances (Perry et al., 2012). Relatedly, emotional social support can provide mothers an outlet for self-care outside of their role as a parent, which is relevant when considering how parenting responsibilities may mean that mothers may neglect their psychological health.

In contrast, maternal emotional social support positively correlated with aggravation in parenting. Again, this goes against what was expected based on the Parenting Process model and the prior literature, which would argue that emotional social support would decrease aggravation in parenting by bolstering maternal functioning. However, the correlation analysis could not make temporal inferences, meaning that the mother's level of aggravation in parenting could have existed within the larger context of a mother's life before the emotional support. Relatedly, aggravation in parenting levels, and by extension, maternal functioning, may be influenced by more external stressors than simply the presence or absence of emotional social support. External stressors in a mother's life may come from systematic societal issues that place additional obstacles in the role of motherhood, which may filter down to the rest of the family system.

Lastly, results for hypothesis 1 found that maternal policy social support did not correlate with the other three variables at T1. It is possible that the limited number of items measuring policy social support were not adequate to produce significant correlations, especially as policy supports, such as social safety net programs, offered to mothers can vary depending on geographical location, family size, and socioeconomic considerations.

The results from the analyses partially supported hypothesis 1a, specifically for emotional social support. The findings between emotional social support, aggravation in parenting, CBPs, and the mother-child relationship were the only consistent results for hypothesis 1a. In contrast, no significant correlations existed between informal, formal, or policy social supports at T2. As a reminder, T2 corresponded with the time in which the focal children of the FFCW study were during adolescence (15-years-old). Evidence from adolescent research indicates that mothers and children may need different resources as a child ages, particularly when parents and adolescents are experiencing new behavioral problems and life challenges (Smetana et al., 2006). As such,

the lack of results for hypothesis 1a may mean that mothers may need different forms of these maternal social supports as their children age that the measurement structures may not reflect.

The results partially supported hypothesis 2. The only significant association between T1 and T2 was the mother-child relationship within the maternal and policy and emotional support models. The closeness between the mother-child may have more influence on itself as the foundations of the relationship build upon the special physical, emotional and social experiences between the mother and child since birth (Bush & Peterson, 2013). This contrasts with the other variables, such as aggravation in parenting or CBPs, which may be more tied to a specific stressful experience, but those characteristics may fade as the experience ends. The same can be said about maternal social support. For instance, mothers may rely more on their support networks during a time of need that may not be necessary in the long term as the mother becomes more secure.

Results from each maternal social support model did not support hypothesis 3. This finding goes against what was put forth by the Parenting Process model, which theorized that social support would act as a “buffer” against stress and maintain maternal functioning, subsequently decreasing negative emotions toward parenting. However, aggravation in parenting scores found in T2 may be related to the situational increase in adolescent CBPs, meaning prior social support in T1 may have less influence on aggravation in parenting at this timepoint. Additionally, the role of maternal social support may only go so far in explaining how mothers holistically look at their roles as a parent. Although motherhood is stressful, the undeniable care that a mother has for their child adds context to maternal stress, meaning that a mother may still feel positively towards their role as a parent, despite difficult circumstances that may arise with their child (Perry et al., 2012).

The cross-lagged path analyses partially supported hypothesis 3a. Specifically, the results indicated that maternal policy social support at T1 had a positive association with CBPs at T2, meaning that higher levels of policy social support at T1 was associated with higher levels CBPs at T2. This finding was surprising given that the prior literature on policy (i.e., social safety net programs) and the Parenting Process model would predict that policy social support would decrease CBPs by providing resource stability for children (Hulme et al., 2001). This unexpected result may point to a limitation of analyzing the effects between the two variables in a vacuum. As noted in the literature review on maternal policy social support, receiving federal or state assistance programs still comes with a societal stigma that may affect children's psychological health, not just mothers (Lapham & Martinson, 2022). Moreover, these programs are often not enough to cover the basic needs of a family, meaning that children, particularly adolescents, may experience resource deficits or lack of services to address behavioral problems stemming from an underlining medical or psychological issue that require further intervention outside of the family unit.

The results from the analyses did not support hypothesis 3b. Again, Belsky's model would predict that greater maternal social support at T1 would have a positive association on the mother-child relationship at T2. This may reflect Belsky's assertion that individual characteristics of the mother and child are also important in understanding maternal functioning and the mother child relationship, also known as the Goodness-of-Fit theory. The Goodness-of-Fit theory suggests that the mother-child relationship is optimal when the environmental demands around a child, such as a mother's parenting characteristics, are in parallel to the child's innate characteristics and style of behaving (Thomas & Chess, 1977). Therefore, maternal social support may play more of moderating role in the interactional "fit" between a mother and her

child (Newland & Crnic, 2017). Furthermore, it is possible that the closeness between the mother-child maintains despite stressful circumstances that necessitate receiving maternal social support (Perry et al., 2012).

Additional Analyses

Across the four cross-lagged path analyses, there was a negative correlation pattern between aggravation in parenting and the mother-child relationship. This result is important in showing the potential negative influence that parenting stress has on the mother-child relationship in middle childhood and adolescence. Additionally, there were notable differences in correlations between T1 and T2. At T1, there was no significant correlations between aggravation in parenting and CBPs or CBPs and the mother-child relationship, yet there were significant findings between these variables at T2. Specifically, there was a negative correlation between aggravation in parenting and CBPs at T2, meaning that mothers experiencing more aggravation in parenting may try more active interventions to stop adolescent CBPs. Relatedly, T2 saw a significant positive correlation between CBPs and the mother-child relationship. This finding seems counterintuitive to what the literature would describe as a strain on the mother-child relationship by reducing parental responsiveness (Amici et al., 2022). However, seeing this finding from a resiliency perspective, the stress induced by adolescent CBPs may allow a mother and child to grow emotionally closer if they have the communication tools to work through the behavioral problems (Ward & Lee, 2020).

Although the maternal social support types did not have a significant direct pathway with aggravation in parenting purposed by hypothesis 3, each model did show a negative association between the mother-child relationship and aggravation in parenting. This finding indicated that greater closeness in the mother-child relationship at T1 was associated with lower levels of

aggravation in parenting at T2. Again, this finding aligns with the Parenting Process model as a closer mother-child relationship would reflect higher maternal functioning that would decrease aggravation in parenting. Furthermore, greater maternal functioning means that a mother may have more psychological resources to better understand how their child may respond to positive or negative experiences. Therefore, as the child ages, the mother has more context to address potential behavioral changes in their child without seeing an increase in maternal stress that undermines maternal functioning.

Hypothesis 3a findings showed a consistent result regarding the positive association between the mother-child relationship at T1 and CBPs at T2. The result indicated that a closer mother-child relationship at T1 was positively associated with higher levels of CBPs at T2. Notably, this finding contrasted with the literature suggesting a closer mother-child relationship would decrease CBPs in adolescence. However, it is noted in the literature that a closer mother-child relationship allows mothers to feel more comfortable giving their children more independence (Branje, 2018). Therefore, suppose an adolescent begins to push the boundaries of their newfound freedom that creates new behavioral problems. In that case, a mother may have to reconsider and adjust the independence to fit the child's emotional maturity. From another perspective, it may be that a closer mother-child relationship in middle childhood helps budding adolescents feel more secure with communicating with their mothers about their behavioral problems, meaning that the rise in CBPs is not a sign of a poor mother-child relationship, but

Limitations

While the current study did reveal important results regarding the role of maternal social support and the longitudinal relationships between the study's variables, the reliance on secondary data does pose limitations. First, the surveys utilized in the original FFCW study asked the mother participants highly vulnerable questions regarding their feelings about motherhood, their children, and the type of social support they receive. As such, it is not unreasonable that response bias may have accounted for lower scores on certain surveys, particularly aggravation in parenting and CBPs that may have affected the study's outcomes. Relatedly, the dataset only explored the extent to which mothers receive maternal social support but did not explore the extent that mothers may provide social support to their social networks.

Secondly, the reliance on secondary data means that the researcher was limited to the original information collected, meaning that there was potentially vital information that was not accessible to the current study. For example, the lack of access to the participants' demographic information meant that the researcher could not analyze certain datapoints, such as economic status or race, that likely have a major role in the relationship among the study's variables. As such, the results may not be generalizable until future research can account for these demographic variables. Similarly, there were limits on the scope of items for use in developing the maternal social support measurement structures. Specifically, the original researchers asked critical items at T1 that they did not ask in T2, and vice-versa. The lack of consistency means that the measurement constructs did not have all possible items that underlined the maternal social support factors. This limitation was most pronounced during the creation of the maternal emotional social support measurement structure.

The writer had to remove multiple items from the emotional social support factor to maintain consistency across timewaves. As discussed, the CFA results found that Item 3, relating to religiosity/spirituality in a mother's life, was the only significant item. Although a relationship with a higher power can provide someone with an emotional outlet, the item was not a perfect representation of the type of maternal emotional social support outlined by the literature review. However, the writer deemed it appropriate to move forward with the item to ensure the representation of all social support types in the final analyses. The potential mismatch of the item representing the emotional social support factor could have contributed to the lack of significant findings related to this factor. More broadly, the lack of robust measurement structures possibly influenced the number of significant results regarding the role of maternal social support.

Although cross-lagged path analysis is a powerful analytic strategy to describe across time influences amongst variables, the method relies on certain assumptions that pose limitations for the current study. Specifically, cross-lagged path analysis assumes that all possible variables are included in the model (Littlefield, 2022). Although the researcher tried to account for as many variables available that could affect the study's models, there may be unknown variables acting upon the models that could affect results. Additionally, some psychological researchers have criticized the use of cross-lagged path analysis utilizing two timepoints for the concerns that the limited timeseries cannot provide helpful information regarding the development process amongst variables overtime (Littlefield, 2022). Although there is no official guidance regarding the number of timepoints necessary for an acceptable cross-lagged path analysis, a third timepoint could have resulted in more helpful information regarding the relationship among the variables. Likewise, the 6-year time lapse between T1 and T2 could have also limited the study. Time lapse considerations for cross-lagged path analysis are important as too short a time lapse

may not be enough time for development processes to take effect. Conversely, a significant time gap may dilute significant findings, resulting in more Type 1 errors (Littlefield, 2022).

Furthermore, the original researchers and dissertation writer analyzed the data through a predominantly White and middle-class view of parenthood which predisposes the researchers to certain biases. These biases can be even more striking when considering the mismatch between the perspective of the researchers and lived experiences of the diverse sample of participants, many of whom identified as young, Black, and from low-resourced areas. Lived experiences greatly influence someone's beliefs regarding motherhood, appropriate childhood behavior, and beliefs about receiving social support (Luster, 1993). However, the lack of inquiry on cultural differences in the original interview did not allow for analyzing how cultural differences may have affected the association amongst the variables. Additionally, the lack of cultural diversity narrows the applicability of the study's findings.

Clinical Implications

Despite the limitations of the current study, the results did illuminate important relationships between the variables that have valuable clinical implications. The study indicates that psychotherapists need to consider the different types of maternal social supports that are present in a mother's life, which may affect psychological health. Emphasizing psychotherapy tools to expand a mother's support network, particularly their emotional social support resources, may assist mother in creating supportive environments that have personal benefits in increasing maternal functioning. It also appears from the study's results that clinicians need to be cautious as to not jump to conclusions that higher levels of social support mean a net positive for mothers and children. A clinician's curiosity is vital in digging deeper to help the mother reflect on

whether her social support resources are functional within her life and the psychological health of her family.

In the last few years, there has been a rapid rise in mental health issues in children in middle childhood and adolescence (Jimenez, et al., 2019). For psychotherapists that work with children in these developmental stages, it is not uncommon to hit up against the societal belief that "fixing" a child with behavioral problems will "fix" the issues within the family unit. However, the pattern of significant results indicating the influence of the mother-child relationship signifies that addressing middle-childhood and adolescent mental health must start by acknowledging the value of the relationship's role. Clinicians in family therapy have multiple evidence-based interventions, such as structural family therapy, which approaches child therapy by targeting the dynamics between parent (e.g., mother)-child through creating health boundaries and teaching tools for effective communication (Jimenez et al., 2019). Tools found within interventions like structural family therapy could assist psychotherapists through intervening more effectively on the mother-child relationship which the research has shown multiple benefits on children's health.

Lastly, the current study highlights how psychotherapy cannot address issues, such as how maternal social support affects mother and child mental health outcomes, by acting alone. Although behavioral health integration in medical settings has become more common in recent years, many psychotherapists need more training on effectively collaborating with other care services providers who can address needs outside of the scope of traditional therapy but nonetheless affects treatment outcomes. Psychotherapists, specifically individuals new to the field, need further institutional support in learning the roles and resources available in different care service providers to create much needed holistic services for mothers and their children.

Conclusions

Regarding the study's first aim, despite the limitations discussed above, the CFA and measurement structure results showed that maternal social support types have unique underlining factors that set each type apart from one another. Creating robust maternal social support categories will ensure future research does not miss the opportunity to better understand these complex phenomena and how they affect maternal functioning.

Aim 2 of the study was to understand whether different types of maternal social support have unique effects in the relationship between aggravation in parenting, CBPs, and the mother-child relationship. Overall, the study did provide evidence that the maternal social support types in question did have some unique effects in relation to other variables. For instance, maternal emotional social support had effects on the study's variables that were different than formal instrumental social support. Similarly, some significant results were found within certain types of social support, such as maternal policy social support being the only significant cross-lagged finding. Additionally, a closer look at the additional analyses results found that variances and p-values changes depending on the type of maternal social support model. When considering that the only datapoints that changed across the models were the social support measurements, these observations lend credence to the argument that the unique functions of these maternal social support types do create unique direct and indirect effects on the variables.

The third aim of the study was to see whether the Parenting Process model applied similarly across different maternal social support types. Overall, the Parenting Process model did not apply similarly across the maternal social support types of interest. Interestingly, there were patterns of significant results regarding maternal social support that contradicted the model. One possible reason for the lack of significant or contradicting results was that the Parenting Process

model did not adequately address the ways in which systematic stress can influence levels of maternal aggravation in parenting and CBPs outside of the mother-child relationship context. Nevertheless, Belsky's model still has a valuable place when trying to understand the mechanism of maternal functioning through a socioecological perspective which better mirrors the bidirectional nature of the mother-child relationship.

Future Directions

Future directions gleaned from the discussion suggests that the research literature requires additional complexity to the study of maternal social support. One potential avenue to add complexity to social support research includes focusing on the reciprocal nature of maternal social support to better understand how mothers balance the give and take of support and how that may affect levels of aggravation in parenting, CBPs, and the mother-child relationship. Future studies would also benefit from considering cultural differences to better understand how someone's cultural beliefs around motherhood and child raising may affect the relationship between the variables. Lastly, future research into social support for all types of individuals needs to continue to refine the definitions of the resources to better determine the function and effects of varying types of support resources on mental health outcomes.

In conclusion, while there has been a greater shift towards equity regarding parenting in the United States, mothers still are the prominent providers of practical and emotional childrearing that continue to be undervalued in society (Sharma et al., 2016). Maternal social support is just one example of social support's vast influence on each person's life. However, there needs to be more research regarding understanding the complexity of the role of this type of support.

Thus, the current study aimed to understand better nuances of different types of social support and their associations between aggravation in parenting, CBPs, and the mother-child relationship overtime. Future research needs to continue to examine various kinds of social support types with all the complexity that the mother-child relationship deserves to create better psychological outcomes for all families.

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APPENDICES

Table 1. *Maternal Baseline Demographics*

Baseline (N=4,898)		
Variable	n	Percentage
Race		
White	1029	21
Black	2331	47.6
Hispanic	1347	27.5
Multi/Other	191	3.9
Age		
<20	852	17.4
20-24	1749	35.7
25-29	1146	23.4
30-39	1038	21.2
>40	113	2.3
(M)	(26.8)	
Education		
Less than H.S.	260	5.3
H.S. Degree	1445	29.5
Some College	1479	30.2
College/Above	1714	35
Rel Status		
Unmarried	3722	76
Married	1175	24
Income		
Less 5,000	1827	37.3
5,000-10,000	901	18.4
10,000-29,999	1068	21.8
<30,000	1102	22.5
(M)	(\$10,950.4)	
Child's Gender		
Girl	2341	47.8
Boy	2557	52.2

Note. **(M)**= Mean

Table 2. *Summary of Exploratory Factor Analysis Results for T1 Maternal Instrumental Social Support Using Maximum Likelihood Robust Estimator corrector (N = 3079)*

Item	Instrumental Social Support	
	Factor 1	Factor 2
Have a legal agreement for child support.	.04	.00
Receives financial help or money from someone other than bio father.	.26	.16
Mother could count on someone to loan her \$200 during the next year.	.60	.12
Mother could count on someone to loan her \$1000 during the next year.	.07	.75
Mother could count on someone to provide her with a place to live.	.66	.02
Mother could count on someone to help her with emergency childcare.	.61	.01
Mother could count on someone to co-sign for a bank loan for \$1000.	.07	.69
Mother could count on someone to co-sign for a bank loan for \$5000.	-.04	.81
Someone would pay for the child's extracurricular activities mother. can't afford.	.35	.23
Eigenvalues	1.34	2.01
% of Variance	23%	38%

Note. Factor loadings over .40 appeared in bold.

Table 3. *Summary of Exploratory Factor Analysis Results for T1 Maternal Policy Social Support Using Maximum Likelihood Robust Estimator corrector (N = 3079).*

Policy Social Support	
Item	Factor 1
Received income from TANF in last 12 months.	.64
Received income from food stamps/EBT in last 12 months.	.62
You or child received Supplemental Security Income in the past 12 months.	.19
You and your child are currently covered by any type of state/ federal health insurance.	.06
Eigenvalues	2.99
% of Variance	78%

Note. Factor loadings over .40 appeared in bold.

Table 4. *Summary of Exploratory Factor Analysis Results for T1 Maternal Emotional Social Support Using Maximum Likelihood Robust estimator corrector (N = 3079)*

Item	Emotional Social Support	
	Factor 1	Factor 2
Mother has a positive relationship with (bio) father.	.17	.96
Mother has a special person mother feels close to and can depend on.	.78	.04
My religious faith is an important guide for my daily life.	.74	.26
Eigenvalues	1.87	1.00
% of Variance	40%	33%

Note. Factor loadings over .40 appeared in bold.

Table 5. *Unstandardized Loadings with Standard Errors and Standardized Loadings for Two Factor Confirmatory Model of T1 Maternal Instrumental Support (N=3079)*

	Unstan- dardized	Stan- dardized
<i>Informal Instrumental Social Support</i>		
Mother could count on someone to loan her \$200 during the next year.	1.00(-)	.68
Mother could count on someone to provide her with a place to live.	1.01(.04)	.66
Mother could count on someone to help her with emergency childcare.	.77(.03)	.61
<i>Formal Instrumental Social Support</i>		
Mother could count on someone to co-sign for a bank loan for \$1000.	1.06(.09)	.78
Mother could count on someone to co-sign for a bank loan for \$5000.	1.50(.26)	.68

Note. () indicates standard error. Dash (-) indicates that the standard error was not estimated. Goodness-of-Fit: CFI (1.00); TLI (1.00); RMSEA (.01). Chi-Square ($\chi^2(4) = 1.28$, $p < .001$).

Table 6. *Inter-Item Reliability for Two Factor T1 Maternal Instrumental Social Support (N=3079)*

Item	Inter-Item Reliability Total
3	.40
5	.52
6	.55
4	.45
8	.60

Table 7. *Cronbach Alpha for Two Factor T1 Instrumental Social Support(N=3079)*

Factor	Cronbach's Alpha	N of items
1	.65	3
2	.62	2
Overall	.70	5

Table 8. *Unstandardized Loadings with Standard Errors and Standardized Loadings for Two Factor Confirmatory Model of T2 Maternal Instrumental Support (N=3086)*

	Unstan- dardized	Stan- dardized
<i>Informal Instrumental Social Support</i>		
Mother could count on someone to loan her \$200 during the next year.	1.00(-)	.63
Mother could count on someone to provide her with a place to live.	1.36(.06)	.69
Mother could count on someone to help her with emergency childcare.	.66(.03)	.54
<i>Formal Instrumental Social Support</i>		
Mother could count on someone to co-sign for a bank loan for \$1000.	1.06(.09)	.78
Mother could count on someone to co-sign for a bank loan for \$5000.	1.09(.07)	.60

Note. () indicates standard error. Dash (-) indicates that the standard error was not estimated. Goodness-of-Fit: CFI (.99); TLI (.98); RMSEA (.03). $\chi^2(4) = 14.03$, $p < .001$.

Table 9. *Inter-Item Reliability for Two Factor T2 Maternal Instrumental Social Support (N=3086)*

Item	Inter-Item Reliability
3	.45
5	.62
6	.82
4	.65
8	.63

Table 10. *Cronbach Alpha for Two Factor T2 Instrumental Social Support (N=3082)*

Factor	Cronbach's Alpha	N of Items
1	.67	3
2	.62	2
Overall	.61	5

Table 11. *Unstandardized Loadings with Standard Errors and Standardized Loadings for One Factor Confirmatory Model of T1 Maternal Policy Support (N=3079)*

	Unstan- dardized	Stan- dardized
Received income from TANF in last 12 months.	1.00(-)	.98
Received income from food stamps/EBT in last 12 months.	.61(.34)	.46

Note. () indicates standard error. Dash (-) indicates that the standard error was not estimated.

Goodness-of-Fit: CFI (.99); TLI (1.00); RMSEA (.00). $\chi^2(1) = 5.45$ $p < .01$.

Table 12. *Cronbach Alpha for One Factor T1 Maternal Policy Social Support (N=3079)*

Factor	Cronbach's Alpha	N of items
1	.90	2

Table 13. *Unstandardized Loadings with Standard Errors and Standardized Loadings for One Factor Confirmatory Model of T2 Maternal Policy Support (N=3086)*

	Unstan- dardized	Stan- dardized
Received income from TANF in last 12 months.	1.00(-)	.85
Received income from food stamps/EBT in last 12 months.	.89(.02)	.83

Note. () indicates standard error. Dash (-) indicates that the standard error was not estimated.
 Goodness-of-Fit: CFI (.99); TLI (.98); RMSEA (.03). $\chi^2(1) = 7.19$, $p < .01$

Table 14. *Cronbach Alpha for One Factor T2 Maternal Policy Social Support (N=3086)*

Factor	Cronbach's Alpha	N of items
1	.83	2

Table 15. *Unstandardized Loadings with Standard Errors and Standardized loadings for Two Factor Confirmatory Model of T1 Maternal Emotional Support (N=3079)*

	Unstan- dardized	Stan- dardized
<i>Parenting Emotional Support</i>		
Mother has a positive relationship with (bio) father.	1.00(-)	.07
<i>Community Emotional Support</i>		
Mother has a special person mother feels close to and can depend on.	1.20(2.05)	.23
My religious faith is an important guide for my daily life.	3.5(5.90)	.85

Note. () indicates standard error. Dash (-) indicates that the standard error was not estimated.
Goodness-of-Fit: CFI (.72); TLI (.67); RMSEA (.98). $\chi^2(1) = 7.19$, $p > .05$.

Table 16. *Unstandardized Loadings with Standard Errors and Standardized loadings for Two Factor Confirmatory Model of T2 Maternal Emotional Support (N=3086)*

	Unstan- dardized	Stan- dardized
<i>Parenting Emotional Support</i>		
Mother has a positive relationship with (bio) father.	1.00(-)	.05
Mother has a special person mother feels close to and can depend on.	.65(.23)	.35
<i>Community Emotional Support</i>		
My religious faith is an important guide for my daily life.	3.46(3.16)	.98

Note. Dash(-) indicates that standard error was not estimated. Could not analyze Goodness-of-Fit.

Table 17. *Pearson Correlations for Study's Primary Variables*

Variable	1	2	3	4	5	6	7	8	9	10	11	
1. T1AggParenting	-											
2. T1CBP	-.009	-										
3. T1Mother/ChildRel	-.137**	.023	-									
4. T1Instrumental	-.079**	.00	-0.18	-								
5. T1Emotional	-.030	-.042*	.049**	.048**	-							
6. T1Policy	.000	.007	.014	.07**	.180**	-						
7. T2AggParenting	.037*	-0.10	-.013	.019	.04*	.009	-					
8. T2CBP	-.005	.029	-.002	.021	-.020	.023	-.35*	-				
9. T2Mother/ChildRel	-.023	0.26	-.012	.031	.039*	.001	-.210**	.31**	-			
10. T2Instrumental	.009	.009	-.030	.008	-.047**	.033	.151**	-.087**	.04*	-		
11. T2Emotional	-.011	-0.20	.022	-.032	.61**	.014	.001	-.004	.06*	-.09**	-	
12. T2Policy	-.012	-.007	.00	-.009	-.06**	-.006	-.017	0.31	.10	.024	-.115**	-

Table 18. Means, Standard Deviation, Skewness, Kurtosis for Study's Primary Variables

Variables	N=	M(SD)	Skewness	Kurtosis
T1Instrumental	3079	3.6(5.4)	-.33	.65
T1Emotional	3079	3.4(4.8)	-1.44	.91
T1Policy	3079	6.5(1.02)	-2.3	17.40
T1CBP	3079	1.2(.80)	-8.2	87.29
T1AggPar	3079	3.0(.69)	-.43	-.32
T1Mother/ChildRel	3079	1.29(.56)	1.9	3.0
T2Instrumental	3082	9.89(8.2)	.55	-.24
T2Emotional	3082	3.2(4.6)	.82	-1.36
T2Policy	3082	6.3(1.18)	-4.7	57.30
T2CBP	3082	1.21(.25)	1.74	3.9
T2AggPar	3082	2.9(.72)	-.65	1.37
T2Mother/ChildRel	3082	1.48(.70)	1.07	1.89

Note. T1= Time 1; T2= Time 2. AggPar=Aggravation in Parenting; CBP= Child Behavioral Problems; Mother/ChildRel= Mother and Child Relationship

Table 19. Means, Standard Deviations, Kurtosis, Skewness for Study's Control Variables

Control Variables	N=	M(SD)	Skewness	Kurtosis
T1Child's Health	3079	1.63(.825)	1.12	.46
T1MaternalHealth	3079	2.44(1.04)	.212	-.58
T1BioDadRel	3079	3.61(3.60)	-2.11	7.59
T1OtherRel	3079	-1.56(3.6)	-.36	-1.82
T1MaternalDep	3079	4.0(2.31)	1.79	1.28
T2Child's Health	3086	1.68(.85)	1.18	.68
T2MaternalHealth	3086	2.57(1.05)	1.00	-.22
T2BioDadRel	3086	3.63(3.59)	-1.08	.89
T2OtherRel	3086	-.90(3.47)	-.76	-1.36
T2MaternalDep	3086	3.89(2.47)	1.68	.85

Note. T1= Time 1; T2= Time 2. BioDadRel= Relationship to Bio Dad. OtherRel= Relationship with partner or significant partner. MaternalDep= Maternal Depression.

Table 20. *Standardized Correlations for T1 Maternal Informal Instrumental Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=3079)*

Variable	1	2	3
1. InInFT1	-	-	-
2. AggParFT1	-.03	-	-
3. CBPT1	-.01**	-.01	-
4. MCRT1	.01	-.14*	.02

Note. T1=Time 1. InInFT1= Informal Instrumental Social Support T1. AggParFT1= Aggravation in Parenting T1. CBPT1= Child Behavioral Problems T1. MCRT1= Mother-Child RelationshipT1. *p < .05, **p < .01 (two-tailed). All significant findings are in bold.

Table 21. *Standardized Correlations for T1 Maternal Formal Instrumental Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=3079)*

Variable	1	2	3
1. InFT1	-	-	-
2. AggParFT1	.10*	-	-
3. CBPT1	.00	-.01	-
4. MCRT1	-.07*	-.13*	.01

Note. T1=Time 1. InFT1= Formal Instrumental Social Support T1. AggParFT1= Aggravation in Parenting T1. CBPT1= Child Behavioral Problems T1. MCRT2= Mother-Child Relationship T1. *p < .05, **p < .01 (two-tailed). All significant findings are in bold.

Table 22. *Standardized Correlations for T1 Maternal Policy Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=3079)*

Variable	1	2	3
1. PolST1	-	-	-
2. AggParFT1	-.02	-	-
3. CBPT1	.07	-.01	-
4. MCRT1	.005	-.14*	.02

Note. T1= Time 1. PolST1= Maternal Policy Social Support T1. AggParFT1= Aggravation in Parenting T1. CBPT1= Child Behavioral Problems T1. MCRT1= Mother-Child RelationshipT1. *p < .05, **p < .01 (two-tailed). All significant findings are in bold.

Table 23. *Standardized Correlations for T1 Maternal Emotional Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=3079)*

Variable	1	2	3
1. EmotQ3T1	-	-	-
2. AggParFT1	-.06**	-	-
3. CBPT1	.03*	-.01	-
4. MCRT1	.06**	-.14*	.02

Note. T1= Time 1. EmotQ3T1= Maternal Emotional Social Support T1. AggParFT1= Aggravation in Parenting T1. CBPT1= Child Behavioral Problems T1. MCRT1= Mother-Child Relationship T1. * $p < .05$, ** $p < .01$ (two-tailed). All significant findings in bold.

Table 24. *Standardized Correlations for T2 Maternal Informal Instrumental Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=3086)*

Variable	1	2	3
1. InInFT2	-	-	-
2. AggParFT2	.03	-	-
3. CBPT2	.01	-.29*	-
4. MCRT2	.05	-.18*	.28*

Note. T2=Time 2. InInFT2= Informal Instrumental Social Support T2. AggParFT2= Aggravation in Parenting T2. CBPT2= Child Behavioral Problems T2. MCRT2= Mother-Child Relationship T2. *p < .05, **p < .01 (two-tailed). All significant findings are in bold.

Table 25. *Standardized Correlations for T2 Maternal Formal Instrumental Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=3086)*

Variable	1	2	3
1. InFT2	-	-	-
2. AggParFT2	-.06	-	-
3. CBPT2	.08	-.29*	-
4. MCRT2	-.14	-.18*	.28*

Note. T2=Time 2. InFT2= Formal Instrumental Social Support T2. AggParFT2= Aggravation in Parenting T2. CBPT2= Child Behavioral Problems T2. MCRT2= Mother-Child Relationship T2. *p < .05, **p < .01 (two-tailed). All significant findings are in bold.

Table 26. *Standardized Correlations for T2 Maternal Policy Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=3086)*

Variable	1	2	3
1. PolST2	-	-	-
2. AggParFT2	.05	-	-
3. CBPT2	.01	-.29*	-
4. MCRT2	.04	-.18*	.28*

Note. T2= Time 2. PolST2= Maternal Policy Social Support T2. AggParFT2= Aggravation in Parenting T2. CBPT2= Child Behavioral Problems T2. MCRT2= Mother-Child Relationship T2. *p < .05, **p < .01 (two-tailed). All significant findings are in bold.

Table 27. *Standardized Correlations for T2 Maternal Emotional Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-child Relationship. (N=3086)*

Variable	1	2	3
1. EmotQ3T2	-	-	-
2. AggParFT2	-.04*	-	-
3. CBPT2	.05*	-.29*	-
4. MCRT2	.08*	-.18*	.28*

Note. T2= Time 2. EmotQ3T2= Maternal Emotional Social Support T2. AggParFT2= Aggravation in Parenting T2. CBPT2= Child Behavioral Problems T2. MCRT2= Mother-Child Relationship T2. *p < .05, **p < .01 (two-tailed). All significant findings in bold.

Table 28. *Unstandardized and Standardized Coefficients with Standard Errors for Cross-Lagged Path Analysis for Maternal Informal Instrumental Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=6165)*

Parameter Estimate	Unstandardized (Standard Errors)	Standardized (Standard Errors)	p
Time 1 → T2			
InInFT1 → InInFT2	.03(.04)	.05(.06)	.42
InInFT1 → AgParFT2	.14(.31)	.01(.02)	.64
InInFT1 → CBPMT2	-2.24(1.60)	.00(.02)	.89
InInFT1 → MCRT2	.20(.34)	-.04(.03)	.15
AgParFT1 → InInFT2	.00(.00)	.00(.02)	.86
AgParFT1 → AgParFT2	.03(.02)	.03(.02)	.19
AgParFT1 → CBPMT2	.00(.06)	.00(.02)	.89
AgParFT1 → MCRT2	.00(.02)	-.10(.02)	.65
CBPMT1 → InInFT2	.00(.00)	.00(.00)	.73
CBPMT1 → AgParFT2	-.03(.02)	-.02(.02)	.21
CBPMT1 → CBPMT2	.03(.07)	.00(.02)	.64
CBPMT1 → MCRT2	-.01(.03)	-.01(.02)	.66
MCRT1 → InInFT2	.00(.00)	.00(.02)	.85
MCRT1 → AgParFT2	.00(.00)	-.01(.02)	.50
MCRT1 → CBPMT2	.12(.05)	.05(.02)	.02
MCRT1 → MCRT2	.02(.02)	.03(.02)	.17

Note. T1= Time 1. T2= Time 2. InInF= Informal Instrumental Social Support. AgParF= Aggravation in Parenting. CBPM= Child Behavioral Problems. MCR= Mother-Child Relationship. $X^2(41) = 110.31$, $p < .001$; GFI = .97; TLI = .95; RMSEA = .02. All significant findings are in bold.

Table 29. *Unstandardized and Standardized Coefficients with Standard Errors for Cross-Lagged Path Analysis for Maternal Formal Instrumental Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=6165)*

Parameter Estimate	Unstandardized (Standard Errors)	Standardized (Standard Errors)	p
Time 1 → T2			
InFT1 → InFT2	-.03(.02)	-.03(.02)	.15
InFT1 → AgParFT2	-1.33(1.42)	-.02(.02)	.35
InFT1 → CBPMT2	-1.15(5.00)	-.01(.02)	.81
InFT1 → MCRT2	-1.69(1.44)	-.02(.02)	.24
AgParFT1 → InFT2	.00(.00)	.06(.08)	.43
AgParFT1 → AgParFT2	.02(.02)	.02(.02)	.41
AgParFT1 → CBPMT2	.02(.06)	.01(.02)	.71
AgParFT1 → MCRT2	.00(.02)	-.01(.02)	.68
CBPMT1 → InFT2	.00(.00)	-.08(.07)	.28
CBPMT1 → AgParFT2	-.02(.02)	-.01(.02)	.50
CBPMT1 → CBPMT2	.00(.07)	.00(.02)	.91
CBPMT1 → MCRT2	-.01(.03)	.08(.08)	.33
MCRT1 → InFT2	.00(.00)	.00(.02)	.85
MCRT1 → AgParFT2	-.02(.02)	-.02(.02)	.28
MCRT1 → CBPMT2	.14(.06)	.05(.02)	.01
MCRT1 → MCRT2	.02(.02)	.03(.02)	.15

Note. T1= Time 1. T2= Time 2. InF= Formal Instrumental Social Support. AgParF= Aggravation in Parenting. CBPM= Child Behavioral Problems. MCR= Mother-Child Relationship. $X^2(41) = 95.10$, $p < .001$; GFI = .98; TLI = .96; RMSEA = .01. All significant findings are in bold.

Table 30. *Unstandardized and Standardized Coefficients with Standard Errors for Cross-Lagged Path Analysis for Maternal Policy Social Support, Aggravation in Parenting, Child Behavioral Problems, and the Mother-Child Relationship (N=6165)*

Parameter Estimate	Unstandardized (Standard Errors)	Standardized (Standard Errors)	<i>p</i>
Time 1 → T2			
PolST1 → PolST2	.06(.06)	.06(.05)	.30
PolST1 → AgParFT2	.02(.02)	.01(.02)	.40
PolST1 → CBPMT2	.02(.00)	.03(.02)	.007
PolST1 → MCRT2	.00(.00)	.00(.02)	.91
AgParFT1 → PolST2	-.37(.27)	-.02(.02)	.12
AgParFT1 → AgParFT2	.02(.02)	.02(.02)	.35
AgParFT1 → CBPMT2	.00(.00)	.01(.01)	.50
AgParFT1 → MCRT2	.00(.02)	-.05(.02)	.01
CBPMT1 → PolST2	-.22(.13)	-.02(.02)	.05
CBPMT1 → AgParFT2	-.02(.02)	-.02(.02)	.17
CBPMT1 → CBPMT2	.00(.00)	.01(.02)	.87
CBPMT1 → MCRT2	.00(.02)	.00(.02)	.81
MCRT1 → PolST2	.14(.26)	.00(.01)	.58
MCRT1 → AgParFT2	-.05(.02)	-.04(.02)	.03
MCRT1 → CBPMT2	.03(.00)	.07(.02)	.001
MCRT1 → MCRT2	.06(.02)	.05(.02)	.01

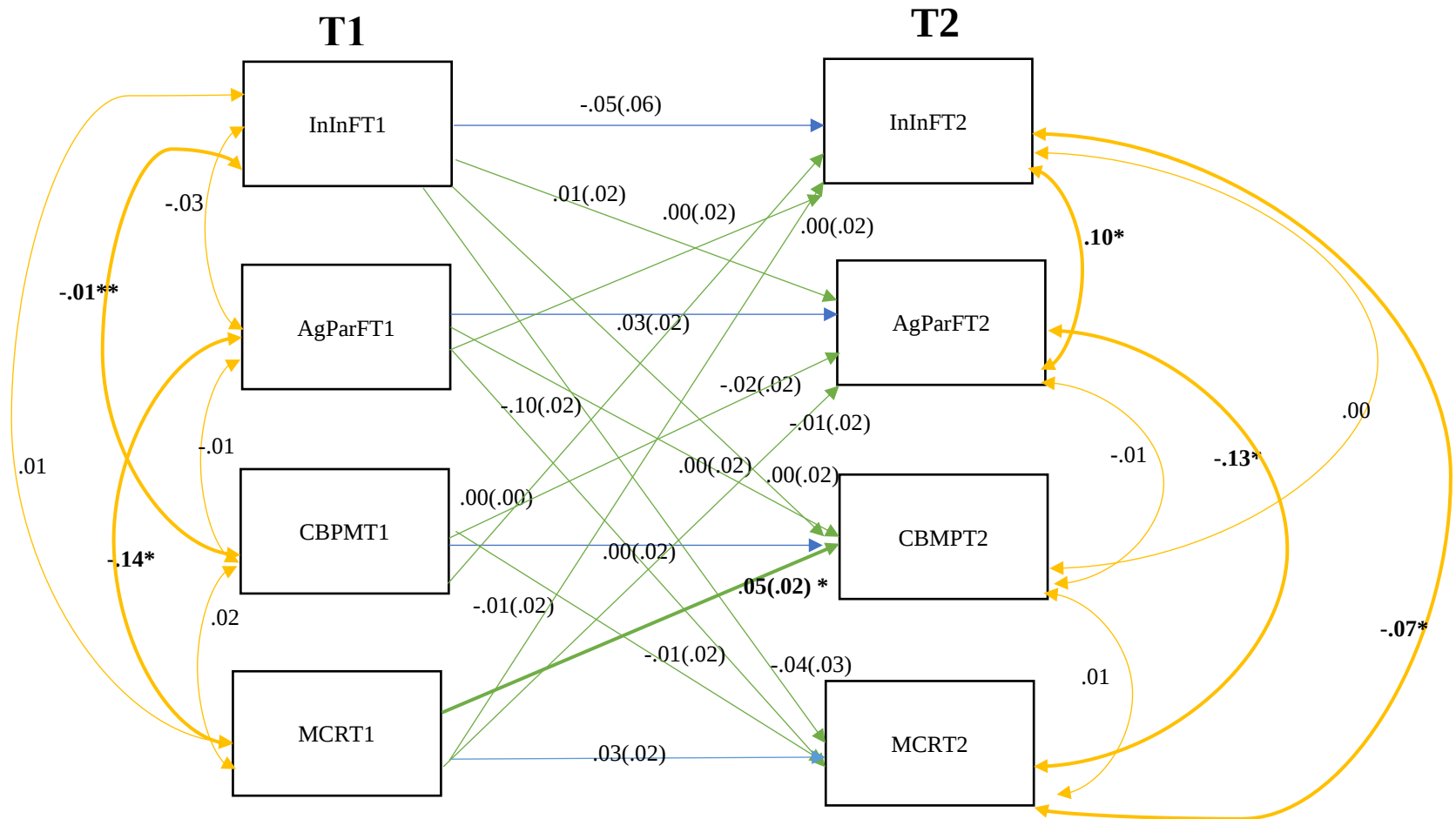
Note. T1= Time 1. T2= Time 2. PolS= Maternal Policy Social Support. AgParF= Aggravation in Parenting. CBPM= Mean Child Behavioral Problems. MCR= Mother-Child Relationship. $X^2(41) = 89.78$, $p < .001$; GFI = .97; TLI = .95; RMSEA = .02. All significant findings are in bold.

Table 31. *Unstandardized and Standardized Coefficients with Standard Errors for Cross-Lagged Path Analysis for Maternal Emotional Social Support, Aggravation in Parenting, and Mother-Child Relationship (N=6165)*

Parameter Estimate	Unstandardized (Standard Errors)	Standardized (Standard Errors)	<i>p</i>
Time 1 → T2			
EmotQ3T1 → EmotQ3T2	.03(.02)	.03(.02)	.10
EmotQ3T1 → AgParFT2	.01(.02)	.02(.02)	.40
EmotQ3T1 → CBPMT2	.00(.00)	.01(.02)	.77
EmotQ3T1 → MCRT2	.00(.02)	-.01(.02)	.73
AgParFT1 → EmotQ3T2	-.01(.02)	-.01(.02)	.52
AgParFT1 → AgParFT2	.02(.02)	.02(.02)	.34
AgParFT1 → CBPMT2	.00(.00)	.01(.02)	.50
AgParFT1 → MCRT2	.00(.02)	.00(.02)	1.00
CBPMT1 → EmotQ3T2	.00(.02)	.00(.02)	.80
CBPMT1 → AgParFT2	-.02(.02)	-.02(.02)	.20
CBPMT1 → CBPMT2	.00(.00)	.00(.02)	.79
CBPMT1 → MCRT2	-.01(.02)	-.01(.02)	.80
MCRT1 → EmotQ3T2	-.03(.02)	-.02(.02)	.19
MCRT1 → AgParFT2	-.05(.02)	-.04(.02)	.02
MCRT1 → CBPMT2	.03(.00)	.06(.02)	.001
MCRT1 → MCRT2	.06(.02)	.05(.02)	.01

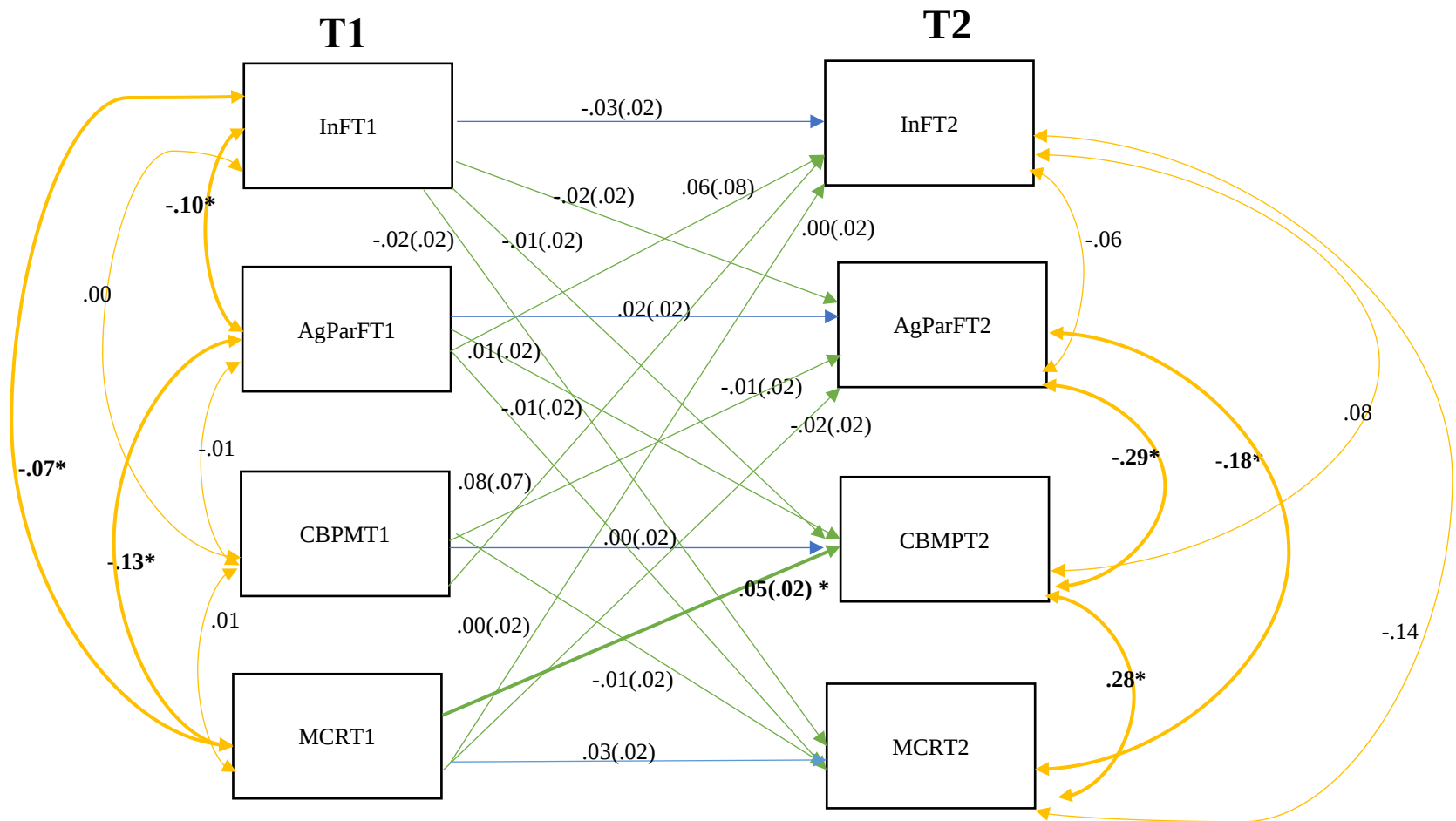
Note. T1= Time 1. T2= Time 2. EmotQ= Maternal Emotional Social Support. AggParF= Aggravation in Parenting. CBPM= Mean Child Behavioral Problems. MCR= Mother-Child Relationship. X^2 (41) = 76.40, $p < .001$; GFI = .98; TLI = .95; RMSEA = .02. All significant findings in bold.

Table 32. *Cross-Lagged Path Analysis with Standardized Coefficients with Standard Errors for Maternal Informal Instrumental Social Support, Aggravation in Parenting, Child Behavioral Problems and the Mother-Child Relationship (N=6165)*



Note. Time 1= T1. Time 2= T2. InInF= Informal Instrumental Social Support. AggParF= Aggravation in Parenting. CBPM= Child Behavioral Problems. MCR= Mother-Child Relationship. $^*p < .05$, $^{**}p < .01$ (two-tailed). Bold Orange Double Arrow= Significant Correlation. Bold Blue Arrow= Significant Autoregressive path. Bold Green Arrow = Significant Cross-lagged path.

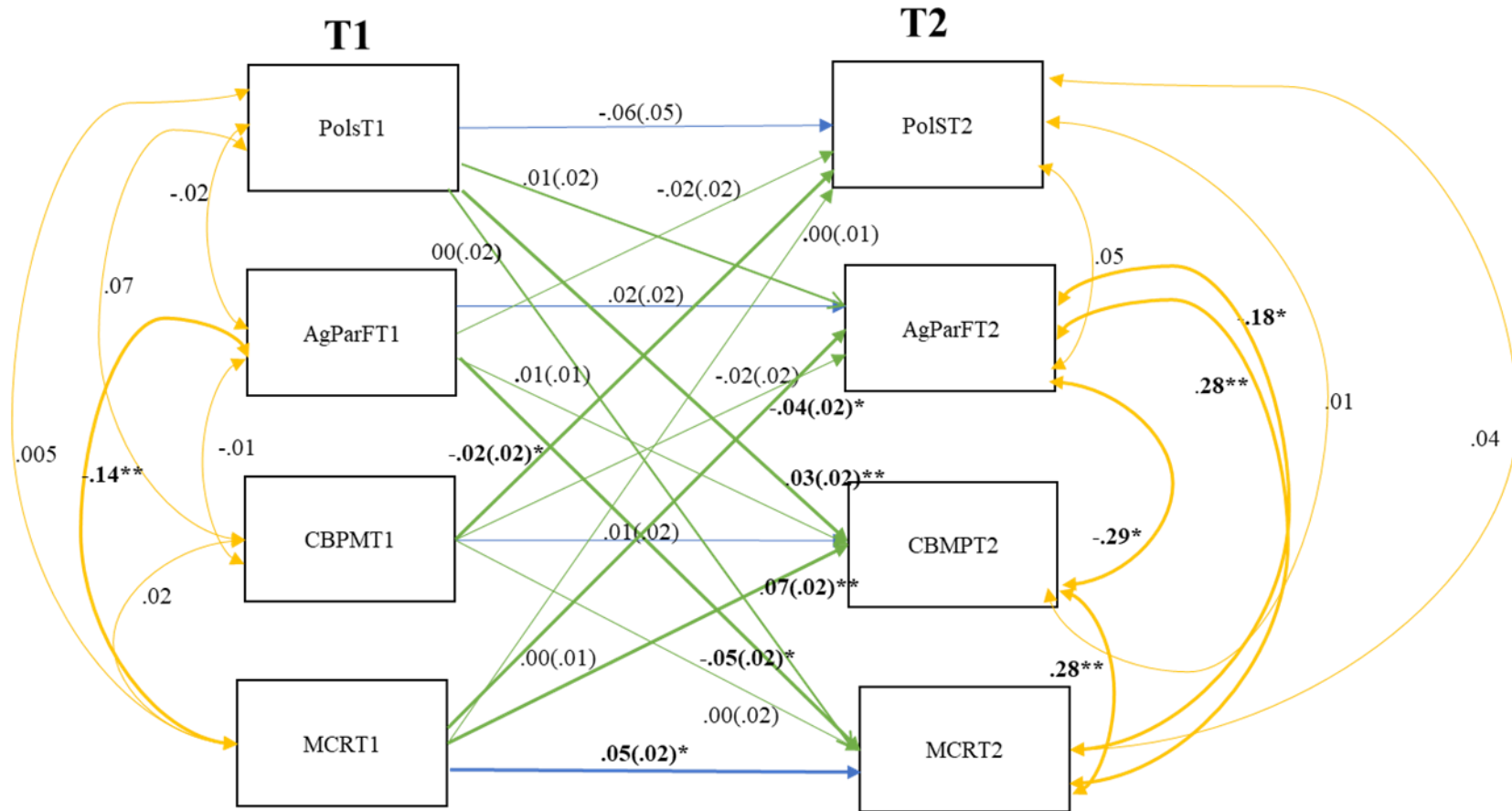
Table 33. *Cross-Lagged Path Analysis with Standardized Coefficients with Standard Errors for Maternal Formal Instrumental Social Support, Aggravation in Parenting, Child Behavioral Problems and the Mother-Child Relationship (N=6165).*



Note. Time 1= T1. Time 2= T2. InInF= Informal Instrumental Social Support. AggParF= Aggravation in Parenting. CBPM= Child Behavioral Problems. MCR= Mother-Child Relationship. * $p < .05$, ** $p < .01$ (two-tailed). Bold Orange Double Arrow= Significant Correlation. Bold Blue Arrow= Significant Autoregressive path. Bold Green Arrow= Significant Cross-lagged path.

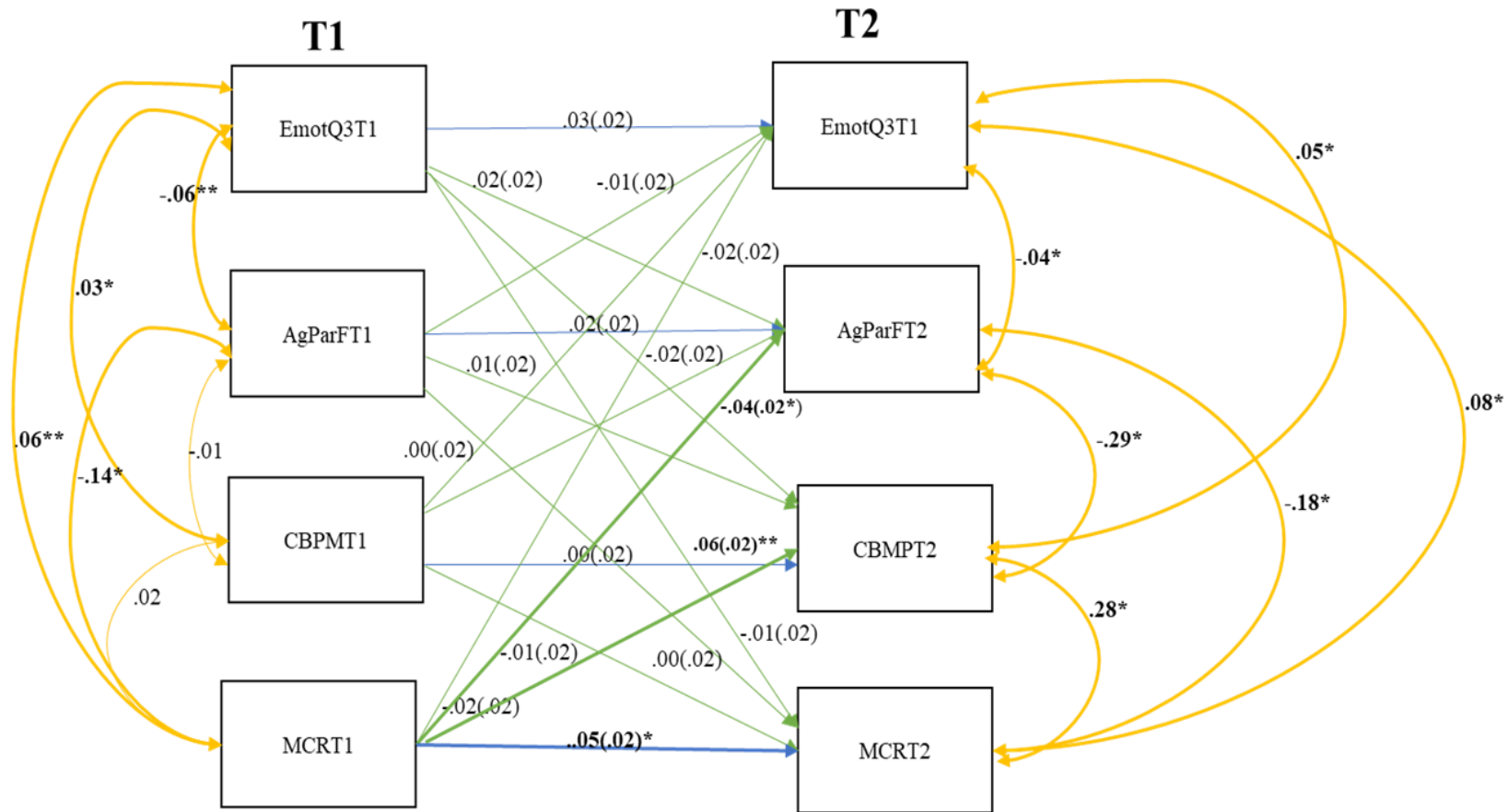
Table 34.

Table 34. *Cross-Lagged Path Analysis with Standardized Coefficients with Standard Errors for Maternal Policy Social Support, Aggravation in Parenting, Child Behavioral Problems and the Mother-Child Relationship T1 (N=6165).*



Note. Time 1= T1. Time 2= T2. Pols= Policy Social Support. AggParF= Aggravation in Parenting. CBPM= Mean Child Behavioral Problems. MCR= Mother-Child Relationship. * $p < .05$, ** $p < .01$ (two-tailed). Bold Double Orange Arrow= Significant Correlations. Bold Blue Arrow= Significant Autoregressive path. Bold Green Arrow = Significant Cross-lagged path.

Table 35. *Cross-Lagged Path Analysis Model with Standardized Coefficients with Standard Errors for Maternal Emotional Social Support, Aggravation in Parenting, Child Behavioral Problems and the Mother-Child Relationship T1 (N=6165).*



Note. Time 1= T1. Time 2= T2. EmotQ3= Emotional Social Support. AggParF= Aggravation in Parenting. CBPM= Mean Child Behavioral Problems. MCR= Mother-Child Relationship. * $p < .05$, ** $p < .01$ (two-tailed). Bold Orange Double Arrow = Significant Correlation. Bold Blue Arrow= Significant Autoregressive path. Bold Green Arrow = Significant Cross-lagged path.

Item	Score
1. Have a legal agreement or child support order.	Yes No
2. Financial help or money from anyone else other than (bio) father.	Yes No
3. Mother could count on someone to loan her \$200 during the next year.	Yes No
4. Mother could count on someone to loan her \$1000 during the next year.	Yes No
5. Mother could count on someone to provide her with a place to.	Yes No
6. Mother could count on someone to help her with emergency childcare.	Yes No
7. Mother could count on someone to co-sign for a bank loan for \$1000	Yes No
8. Mother could count on someone to co-sign for a bank loan for \$5000	Yes No
9. Someone would pay for child's extracurricular activities mother can't afford	Yes No

Figure 1. Maternal Instrumental Social Support Questions for Confirmatory Factor Analysis

Item	Score
2. Received income from welfare/TANF in last 12 months	Yes No
3. Received income from food stamps/EBT in last 12 months	Yes No
4. You or child received Supplemental Security Income in the past 12 months	Yes No
5. You are currently covered by federal or state type of health insurance	Yes No

Figure 2. *Maternal Policy Social Support Questions for Confirmatory Factor Analysis*

Item	Score
1.Mother has a good relationship with bio father)	Yes No
2.Any special person mother feels close with and can depend on	Yes No
3. My religious faith is an important guide for my daily life	Yes No

Figure 3. *Maternal Emotional Social Support Questions for Confirmatory Factor Analysis*

Child Behavior Problems Checklist
Internalizing- Anxiety/Depressed Behavior
1.Child cries alot
2.Child feels worthless or inferior
3.Child is nervous, high-strung, or tense
4.Child is too fearful or anxious
5. Child feels too guilty
6.Child worries
Internalizing- Withdrawn
1.Child is underactive, slow moving, lacks energy
2.Child is unhappy, sad, or depressed
Externalizing- Aggressive Behavior
1.Child is cruel, bullies, or shows meanness to others
2.Child destroys things belonging to the family or others
3. Child is disobedient at home
4. Child is disobedient at school
5. Child gets in many fights
6. Child physically attacks people
7. Child is stubborn, sullen, or irritable
8. Child has temper tantrums or a hot temper
9. Child threatens people
10. Child is unusually loud
Externalizing- Rule Breaking
1.Child doesn't seem to feel guilty after misbehaving
2.Child hangs around with others who get in trouble
3.Child lies or cheats
4.Child runs away from homes
5.Child sets fires
6.Child steals at home
7.Child steals outside the home
8.Child swears or uses obscene language
9.Child vandalizes

Figure 4. *Child Behavior Problems Checklist Questions*

Item	Score
Please tell me how much you agree or disagree with each statement.	Do you...
1. Being a parent is harder than I thought it would be.	Strong Agree- 1 Somewhat Agree- 2 Somewhat Disagree- 3 Strongly Disagree- 4
2. I feel trapped by my responsibilities as a parent.	Strong Agree- 1 Somewhat Agree- 2 Somewhat Disagree- 3 Strongly Disagree- 4
3. I often feel tired, worn out, or exhausted from raising a family	Strong Agree- 1 Somewhat Agree- 2 Somewhat Disagree- 3 Strongly Disagree- 4
4. I think that taking care of my child is much more work than pleasure.	Strong Agree- 1 Somewhat Agree- 2 Somewhat Disagree- 3 Strongly Disagree- 4

Figure 5. *Aggravation in Parenting Questions*

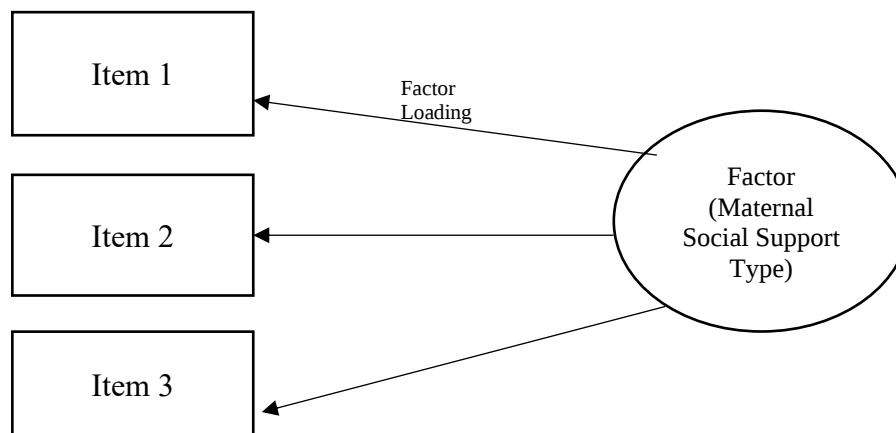
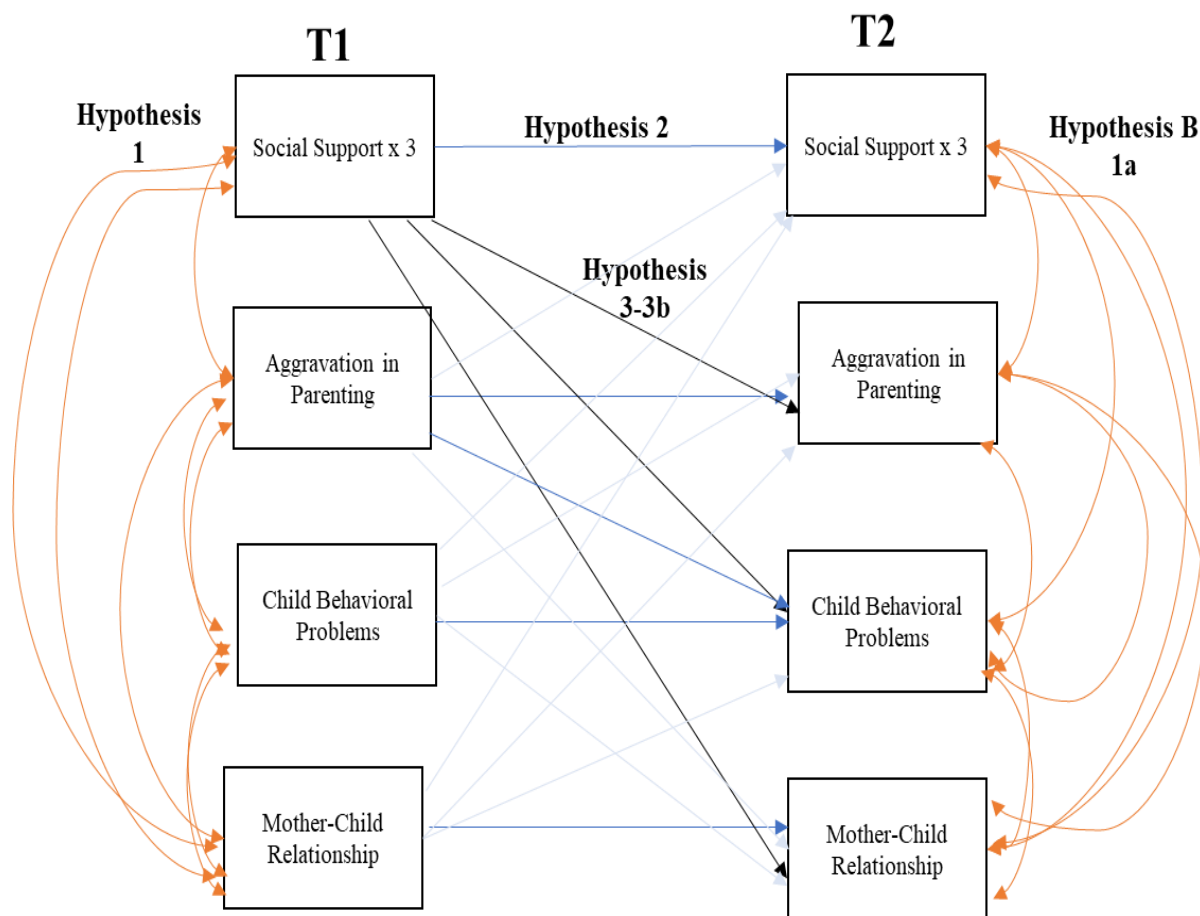
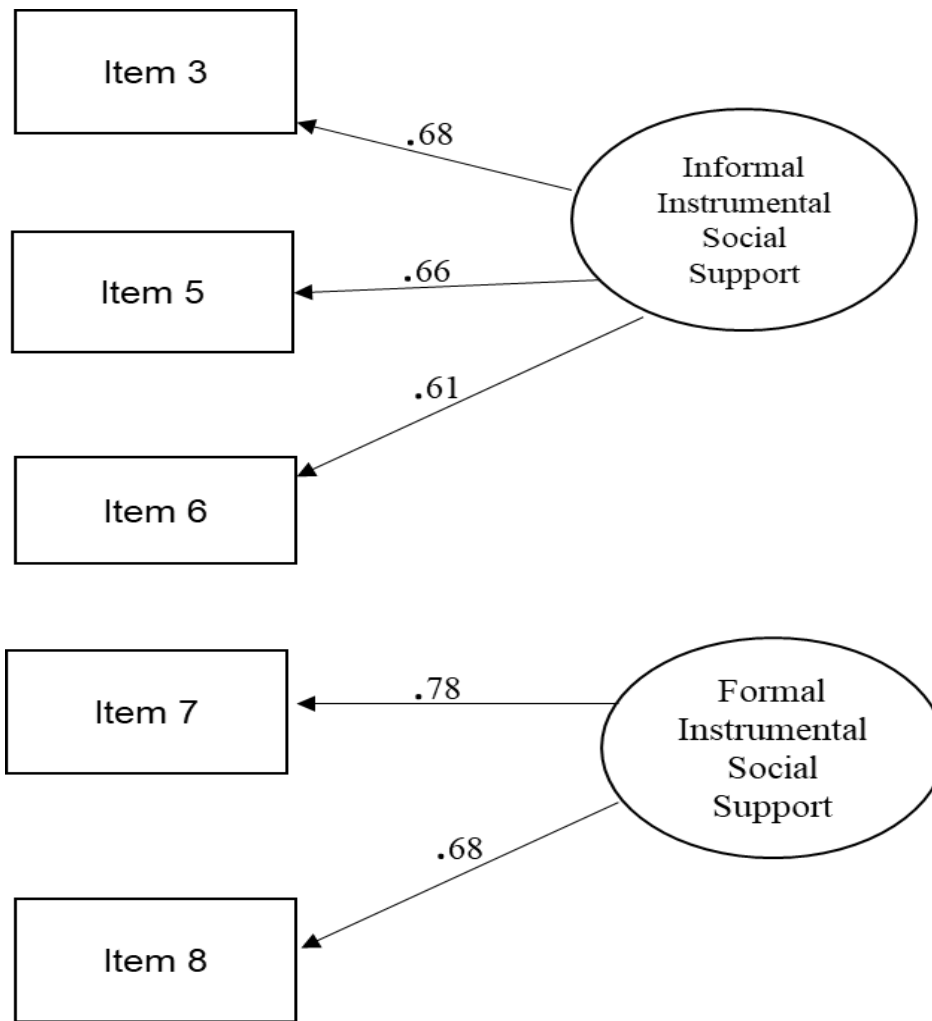


Figure 6. *CFA Model Example*



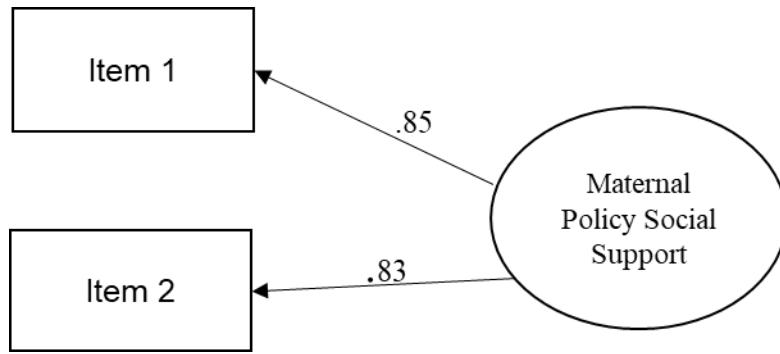
Note. Note. T1= Time 1. T2= Time 2. Social Support x3= Instrumental, Emotional, and Policy Support. Hypothesis 1 & 1a= Correlation between variables in Orange. Hypothesis 2= Direct pathway between each variable from T1 and T2 in Dark blue. Hypothesis 3-3b= Cross-Lagged Panel SEM in Black.

Figure 7. *Cross-Lagged Path Analysis Model Example*



Note. Direct arrows= Standardized Factor Loadings.

Figure 8. CFA Model for Maternal Instrumental Social Support



Note. Direct Arrows= Standardized Factor Loadings

Figure 9. *CFA Model for Maternal Policy Social Support*

VITA

Natalie Christine Blocher received her Bachelor of Arts in Psychology with a minor in Women's Studies from the University of Tennessee, Knoxville, in 2016. She began her doctoral clinical psychology under the advisement of Dr. Todd Moore at the University of Tennessee in 2018. Ms. Blocher received her Master of Arts in Clinical Psychology in May 2021 with a thesis titled Variables related to viral load and CD4 variance in men living with HIV. As a doctoral candidate, Ms. Blocher has had the opportunity to participate in a variety of research pursuits relating to social support and mental health outcomes. In July 2023, Ms. Blocher plans to begin her predoctoral internship at the St. Cloud VA Health Care System.