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**PARENT STRESS AND EXTERNALIZING BEHAVIORS ARE
RELATED: THE REASON THEY ARE RELATED DEPENDS ON CHILD
AGE**

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PARENT STRESS AND EXTERNALIZING BEHAVIORS ARE RELATED: THE
REASON THEY ARE RELATED DEPENDS ON CHILD AGE

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ABSTRACT

PARENT STRESS AND EXTERNALIZING BEHAVIORS ARE RELATED: THE REASON THEY ARE RELATED DEPENDS ON CHILD AGE

Maura L. Francis

Children with externalizing disorders are typically found to be more challenging to interact with and are met with less patience, empathy, and distress tolerance in managing their symptoms compared to children with internalizing disorders. Not only are the symptoms of these disorders challenging for children but also for parents, which can cause a considerable amount of stress. These symptoms are typically addressed by different interventions that primarily require parent involvement to manage disruptive behaviors and non-compliance. There is also common comorbidity that often overlaps between externalizing and internalizing symptoms, which can make differential diagnosis and treatment planning more difficult than expected. The relationship between externalizing and internalizing symptoms is one that is challenging to parse out; however, external factors such as parent stress makes it even more difficult to understand whether these symptoms are caused or exacerbated by parent stress. Little research is existing that explores the impact of age on child symptoms and parent stress, and how it impacts the parent and child relationship. The objective of this study was to explore the effects of externalizing symptoms in their relationship to parent stress a function of child age. The

participants of this study include a diverse sample of 26 participants with parent reports of both child externalizing symptoms and parent stress. Findings were contrasted with internalizing disorders. Results also highlight the importance of understanding symptom presentation across development in relation to parent stress and how that impacts treatment or barriers to treatment.

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Introduction

Externalizing behaviors in children are typically identified within a spectrum of different characteristics that define childhood disruptiveness, such as defiance, impulsivity and hyperactivity, and aggression (Hinshaw, 1992). It is essential for the research to expand to understand the function and contributions of childhood externalizing behaviors. According to Achenbach (1978), there is a well-known distinction between externalizing and internalizing disorders in the field of child psychology and psychiatry. Typically, people tend to exhibit less empathy for individuals with externalizing behaviors versus those who suffer from internalizing symptoms. Children with externalizing problems are considered a public health issue, due to increasingly being at risk for school problems, delinquency, substance use, and becoming perpetrators and/or victims of violence. However, what people from the outside public are not as aware of is the overlap between externalizing and internalizing behavior problems (Hinshaw, 1992). Children who are identified as being depressed or anxious are seen as less likely to have problems with aggression or delinquency; they are not exempt from exhibiting conduct problems. It is well in fact that children who express different externalizing behaviors can experience internalizing behaviors as well. Children with behavioral disorders tend to be highly misunderstood because it is more likely that their actions are perceived as more purposeful, malicious, uncontrollable, unmanageable, and a threat to the external world.

Although there are many contributing factors that impact childhood externalizing behaviors, but one factor that has been associated with externalizing is parental stress. Mackler et al. (2015) proposed a transactional model of the relation between parental stress and child externalizing that emphasized the reciprocal relation between these two

variables. Specifically, Parental stress may exacerbate child externalizing, but child externalizing can also contribute to parental stress. Using longitudinal data with children between 5 and 10 they found that this reciprocal relationship may vary with child age. In this research we propose to replicate their findings and extend them over a longer age range of 4 to 18 years. Previous research has implicated stress as a determinant in the development of psychopathology during childhood (Garmezy & Rutter, 1983; Crnic & Greenberg, 1990). Most of the literature primarily focuses on the role of child externalizing behaviors and its effects on parent stress. The ability to provide treatment to families whom are dealing with not only their children with externalizing behaviors, but multiple factors that can impact the child's behavior, such as socioeconomic disadvantage, interpersonal conflict, poor living conditions, violence parent psychopathology, and lack of social support (Kazdin & Whitley, 2003). All of these contextual and family factors can contribute to high levels of stress, which is impactful on a child's development across time.

Younger Children and Externalizing Disorders

Parent-child relationships tend to become strained at an early age for individuals presenting with externalizing symptoms. This creates a coercive cycle which the parent and child both behave in attempt to control the other's behavior (Shaw, Owens, Giovannelli, and Winslow, 2001). The child behaves in reaction to the parent and the parent behaves in reaction to the child, which the parent is more likely to employ effective parenting strategies to manage the child's misbehavior. However, when combined with the child's symptoms, such as hyperactivity and negative affect, there is a

greater emphasis on parent's hostility in managing not only the child, but their symptoms as well. It is also predicted that these behaviors only continue to get worse as the child ages.

Temperament also plays a vital role in the association between parent stress and parent-child interaction. Research has shown that difficult temperaments have been linked to less positive parent-child relationships. Temperament is typically described as innate; forming as an infant and remains constant throughout development and does not change. It is modified by the child's ability to adapt and adjust to their environment and those who are involved in their lives.

Older Children and Externalizing Disorders

As mentioned earlier, as disruptive behavior worsens, the coercive cycle of managing behavior becomes stronger and more difficult to intervene and implement change. The development and maintenance of child externalizing behaviors are also affected by parent stress. As parent stress becomes more apparent, the amount of attention towards negative behaviors in children tend to receive more attention; thus, the cycle of aversive and coercive interchanges perpetuates and maintains or even increases externalizing symptoms in children. Parents will report higher symptoms of externalizing behaviors in this instance. Treatment of externalizing behaviors in adolescence becomes much more challenging to maintain, thus, resulting in increased parenting stress. Conduct Disorder, which is diagnosed in adolescence of individuals who had a predisposition to family adversity, poor supervision, rejection, and low parental involvement, in addition to defiance and aggression (Toupin, Déry, Pauzé, et al., 2000).

Expectations of Parents and Children—Change in Stress

Pasalich, Dadds, Hawes, and Brennan (2011) used the Family Affective Attitude Rating Scale (FAARS) to measure parental relational schemas regarding their thoughts and feelings about their parent-child relationship. What the authors found was that parents of preadolescent children, ages 4-11, with externalizing disorders are found to have less positive relational schemas and more negative relational schemas about their child's behavior. This was found to be especially true within this clinical sample. In this study, it was also found that parent responses on the FAARS between parents with children with externalizing disorders versus internalizing disorders (Pasalich, Dadds, Hawes, and Brennan, 2011). Existing literature has already noted that it is typically of parents with externalizing children to view their interpersonal relationship negatively than those with typically developing children (Potier & Day, 2007). The cause of this is the parents' relational schemas, which in this instance are knowledge structures that represent themselves and their parent-child relationship. Parents attribute their narratives of problem maintenance to their child's psychopathology (Pasalich, Dadds, Hawes, and Brennan, 2011). These schemas fall largely from problems within the family dynamic associated with family cohesiveness, higher levels of family conflict, and parental psychopathology. A child with conduct problems, according to Pasalich, Dadds, Hawes, and Brennan (2011), are found that their behaviors are merely patterns of hostility by their parents, which is then reciprocated and negatively reinforced within the parent-child relationship.

Children are not the creators of their actions, moral, and values in the same way of their parents (Baumrind, 1978). Thus, parents are influential in determining effect upon their child's personality, character, and competence of their development, whether it

be consciously or subconsciously (Baumrind, 1978). As stress changes in parents, the diffusion of responsibility will be shifted to the child as the source of distress. The likelihood of the parent implementing techniques, such as using differential attention and setting appropriate limits/boundaries, that will help manage child externalizing behaviors are lower due to high levels of stress. However, when these behaviors are not addressed in early childhood through evidence-based interventions, such as Behavior Management Training (BPT), these behaviors will continue to be maintained and worsen over time, and parent stress will also continue to increase. Therefore, treatment within the adolescent population of those presenting with externalizing behaviors will be met with a different form of treatment that will is much more intense than BPT, such as Multisystemic Therapy (MST) which teaches families how to foster their success in recovery after these problems have precipitated over time and throughout development.

Hypothesis

The present study is designed to further our understanding of the relation between Parental Stress and Child Externalizing Behaviors. Specifically, we hypothesize that the process that underlies the correlation between Parental Stress and Child Externalizing differs as a function of the age of the child. In contrast for older children, it is the externalizing behaviors of the adolescent that leads to increases in parental stress. Parent stress is affected by both child and parent interactions; however, Scar (1992) suggested that this effect is comparatively small. Prior research examined the relationship between parent stress and child externalizing behavior in younger and older children. Mackler et al. (2015) found that child externalizing behavior was exacerbated by parent stress in

younger children and parent stress was exacerbated by child externalizing behavior in older children. The prior study looked closely at parent reaction as a mediator between these associations, which this effect was not supported and the cause of understanding the dynamic influences on child and parent function were not clearly understood between parent stress and externalizing behavior. Secondly, we also considered the relationship between parent stress and child internalizing symptoms because often the symptoms can overlap which become difficult to distinguish.

Method

Participants

In the current study, archival data was used from the St. John's University Center for Psychological Services, a university-based community clinic in Queens, NY. Therapy services are provided by a range of novice, graduate students in-training whom are working towards their doctorate in clinical or school psychology and are closely supervised via video recording by licensed psychologists. The data used in this study is part of an archival dataset that continued to grow as we continue to recruit clients for therapy services. Written consent from both legal guardians was obtained prior to therapy for clinical data to be used in research. We obtained a diverse sample of children whose parents completed bi-weekly measures assessing both parent attitudes and child symptomatology. In our sample, we divided our sample for our analysis into two age cohorts: younger children and older children, ranging from ages 4-10. The younger children cohort was identified from ages 4-7 and the older children cohort was identified from ages 8-10. Mothers completed measures in the waiting room of the clinic at each appointment bi-weekly.

Measures

Child Symptoms. Maternal reports of child's overall symptoms were assessed using the Youth Outcomes Questions, 2.01(Y-OQ), a brief 64-item parent report measure, given at the start of therapy and bi-weekly, that assesses child's symptoms throughout the course of treatment at the clinic. Parents are asked questions related to a wide range of troublesome behaviors and mood that are common in childhood and

adolescence, such as “My child wants to be alone more than other children of the same age” or “My child argues or is verbally disrespectful” to be true over that past 7 days. These questions are then answered, rating from “never or almost never” to “almost always or always.” The total score is reflective of all the distress in the client’s life and is derived from the six scales subscales: intrapersonal distress (i.e., anxiety, depression, and fearfulness), somatic (i.e., headache, stomach, bowel, and dizziness), interpersonal relationships (i.e., attitude, communication and interaction with parents, adults, and peers), critical items (i.e., paranoid ideation, suicidal ideation, hallucination, and delusions), social problems (i.e., poor prosocial interactions, delinquent, or aggressive behaviors), and behavioral dysfunction (i.e., organize and complete tasks, frustration tolerance, impulsivity, and inattention). The psychometric properties reflect favorable internal consistency, test-retest reliability, and concurrent validity. The Y-OQ was designed to regularly and briefly monitor client outcomes, at baseline, while also constructed to be sensitive to change over short period of time (Wells, Burlingame, and Rose, 2003; Burlingame, Wells, Lambert, and Cox, 2004, p. 238).

Parent Stress. The Bimonthly Longitudinal Youth (BIL-Y) Questionnaire is a caregiver report completed bi-weekly over the course of the child’s therapy to assess the parent’s view of their parenting experience, their perception of their child’s therapy, the home environment, and the parent’s goals. It includes items from the following validated measures: The Parenting Stress Index, Parent Motivation Inventory, and the Family Environment Scale, to provide information on parenting stress, parenting competence, and parental motivation (Abidin, 2012; Nock & Photos, 2006; Moos & Moos, 1986). Two subscales from the BIL-Y (see Appendix A) were used in this study: Parenting

Efficacy ($\alpha=.711$) and Child Difficulty ($\alpha=.744$), the internal consistency for each scale in our sample used was acceptable.

Procedures

To further evaluate the relationships between child internalizing and externalizing symptoms, age, and parent stress variables, a series of regression analyses were estimated at baseline. To measure symptoms, our sample at each assessment included elevated scores on externalizing and internalizing scales based on clinical cut-off scores on the Y-OQ. To measure parent stress, our sample at each assessment included high scores reported on parent efficacy and child difficulty on the BIL-Y. A preliminary analysis to examine descriptive information for the main symptom and parenting variables. Then, moderation analyses were run in PROCESS, where we treated age as a continuous variable, which is more powerful and relieves issues of dichotomization.

Results

Descriptive Statistics at Baseline

Table 1. Descriptive Statistics of Variables at Baseline

	N	Minimum	Maximum	Mean	Std. Deviation
Age	131	4	18	10.82	3.72
Externalizing (sum)	131	0	31	10.87	8.17
Internalizing (sum)	131	0	26	7.53	5.67
Child Difficulty	26	1	4	2.12	1.023
Parenting Efficacy	26	2	4	3.08	0.65

Table 2. Descriptive Statistics of Sex at Baseline

	N	Percentage
Male	61	46.6
Female	58	44.3
Total	119	90.8
Missing Cases	12	9.2
Total	131	100

Statistical analyses were conducted using SPSS Version 26 for Windows.

Originally, 131 children from the BIL-Y dataset ($N=131$) were considered (*see Table 1*).

After merging both Y-OQ and BIL-Y datasets to only focus on baseline data during the first 10 weeks of therapy, the sample size was reduced to 26 children in the final sample.

We calculated continuous baseline descriptive data or dichotomous variables. Since there are no norms reported within this sample, scores were not centered. Separate analyses were used to report the aggregated mean of each parent variable to compare to the value of the scale. These analyses were used to better represent the average length of therapy and to better describe the sample after cutting the sample size (*see Table 2*).

Table 3. Correlations of Parent Variables and Child Symptoms

	1	2	3	4	5
1. Age	—				
2. Internalizing (sum)	0.167	—			
3. Externalizing (sum)	-0.279	0.532	—		
4. Child Difficulty	0.093	0.289	0.337	—	
5. Parenting Efficacy	0.252	-0.389	-0.229	-0.454	—

Although we were primarily interested in symptoms and child difficulty, we were interested in the unique relationship between both internalizing and externalizing. We found that internalizing and externalizing are highly correlated and that overall there is a relation between child difficulty and externalizing (*see Table 3*). Children who were rated higher on externalizing and internalizing symptoms are rated as more difficult by parents.

Moderating Effect of Age on Relations Between Parenting, Internalizing, and Externalizing Variables

Table 4. Moderation Model Summary of Child Externalizing Symptoms and Child Difficulty

R	R-squared	MSE	F	df(1)	df(2)	p
0.57	0.33	22.55	3.61	3	22	0.02

Table 5. Age Interaction Between Child Externalizing Symptoms and Child Difficulty

	Coefficient	Std. Error	t	p	LLCI	ULCI
Constant	7.86	0.96	8.13	0.00	5.85	9.86
Child Difficulty	1.98	0.93	2.12	0.04	0.04	3.91
Age	-0.71	0.32	-2.20	0.03	-1.37	-0.04
Interaction	-0.65	0.36	-1.81	0.08	-1.40	0.09

For the primary analyses, we predicted that age would moderate the relationship between child externalizing symptoms and child difficulty. The interaction effect found here is not significant ($p=0.08$). Overall, all children are seen about the same in elevated externalizing symptoms; however, younger kids whose parents rated high on externalizing symptoms were found to be more difficult ($r=17.87$). As parents rated younger kids lower on child difficulty, their externalizing symptoms were also rated low ($r=5.52$). When parents rated older kids as more difficult, their externalizing symptoms were slightly higher ($r=5.72$) than those who were not perceived as difficult ($r=5.45$).

Table 6. Moderation Model Summary of Child Externalizing Symptoms and Parent Efficacy

R	R-squared	MSE	F	df(1)	df(2)	p
0.40	0.16	28.14	1.44	3	22	0.25

Table 7. Age Interaction Between Child Externalizing Symptoms and Parent Efficacy

	Coefficient	Std. Error	t	p	LLCI	ULCI
Constant	7.43	1.14	6.50	0.00	5.06	9.80
Parent Efficacy	-0.53	1.83	-0.29	0.77	-4.34	3.27
Age	-0.51	0.36	-1.41	0.17	-1.27	0.24
Interaction	0.81	0.75	1.08	0.28	-0.73	2.37

For secondary analyses, we predicted that age would moderate the relationship between child externalizing symptoms and parent efficacy. The interaction effect found was not significant ($p=0.28$). Overall, all children were continued to be seen about the same in elevated externalizing symptoms; however, parents who reported that they feel less efficacious with younger children with high externalizing symptoms ($r=12.61$). Parents also reported feeling less efficacious with older children, but their externalizing symptoms were rated the lowest ($r=4.38$). Parents reported feeling efficacious with younger children whose externalizing symptoms were lower ($r=6.72$) and with older kids whose symptoms were also reported lower ($r=7.27$).

Table 8. Moderation Model Summary of Child Internalizing Symptoms and Child Difficulty

R	R-squared	MSE	F	df(1)	df(2)	p
0.70	0.50	33.71	7.45	3	22	0.00

Table 9. Age Interaction Between Child Internalizing Symptoms and Child Difficulty

	Coefficient	Std. Error	t	p	LLCI	ULCI
Constant	12.29	1.18	10.40	0.00	9.84	14.74
Parent Efficacy	2.17	1.14	1.90	0.06	-0.19	4.53
Age	-0.00	0.39	-0.02	0.98	-0.82	0.80
Interaction	-1.89	0.44	-4.27	0.00	-2.81	-0.97

For tertiary analyses, we predicted that age would moderate the relationship between child internalizing symptoms and child difficulty. The interaction effect found was significant ($p < .001$). Overall, younger children with internalizing symptoms were rated as more difficult by their parents ($r = 27.09$). In contrast, younger children who were rated low on internalizing symptoms were viewed as less difficult by parents ($r = 0.35$). In older children, those with higher levels of internalizing symptoms were viewed as more difficult ($r = 16.57$) than those with lower internalizing symptoms ($r = 6.95$).

Table 10. Moderation Model Summary of Child Internalizing Symptoms and Child Difficulty

R	R-squared	MSE	F	df(1)	df(2)	p
0.56	0.32	45.89	3.52	3	22	0.03

Table 11. Age Interaction Between Child Internalizing Symptoms and Parent Efficacy

	Coefficient	Std. Error	t	p	LLCI	ULCI
Constant	11.25	1.45	7.71	0.00	8.23	14.28
Parent Efficacy	-3.41	2.34	-1.45	0.15	-8.28	1.45
Age	0.53	0.46	1.13	0.26	-0.44	1.50
Interaction	1.91	0.95	1.99	0.05	-0.07	3.89

Lastly, we predicted that age would moderate the relationship between child internalizing symptoms and parent efficacy. The interaction effect found is significant ($p=0.05$). Overall, parents tend to feel most efficacious with children with low internalizing symptoms. In contrast, parents reported feeling less efficacious with younger children rated high on internalizing symptoms ($r=17.03$). In older children, parents reported feeling less efficacious with children higher on internalizing symptoms ($r=14.85$) than those who were rated slightly lower ($r=11.13$).

Figure 1. Age Interaction on Externalizing Versus Internalizing of Child Difficulty

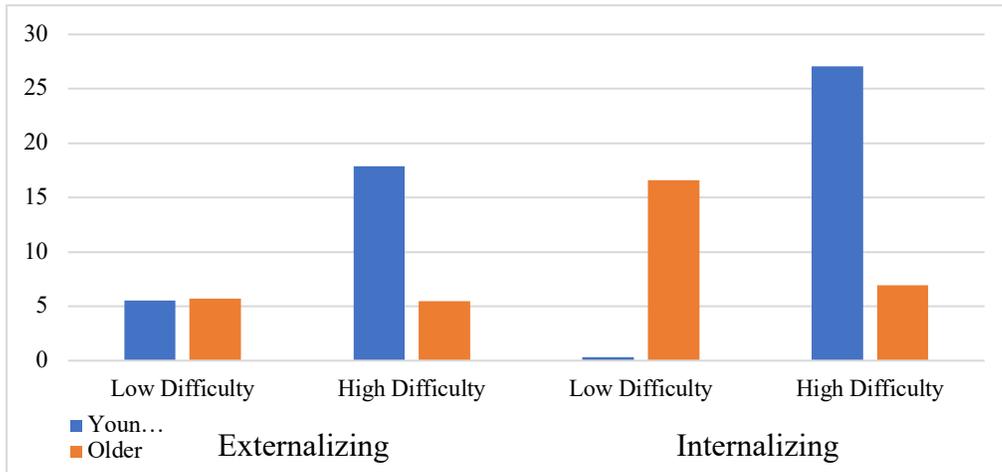
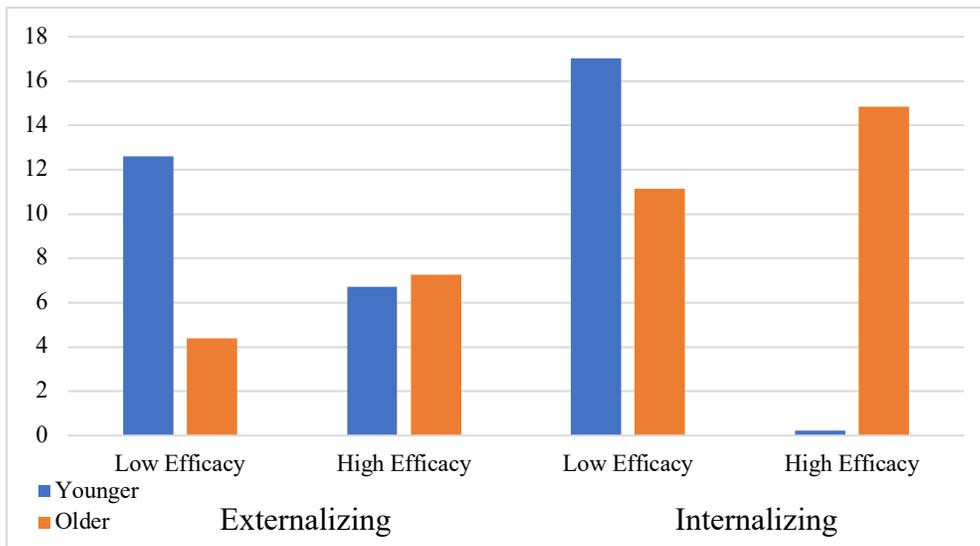


Figure 2. Age Interaction on Externalizing Versus Internalizing on Parent Efficacy



Discussion

Generally, across this sample, children with externalizing or internalizing symptoms are perceived more difficult by their parents; however, children with externalizing symptoms are viewed more difficult. Over the first 10 weeks in treatment, parents in both age cohorts are typically rating their child's externalizing symptoms at higher rates, which is consistent with interaction but slightly more focused. Externalizing symptoms look different across development. Parents of younger children with externalizing symptoms report higher frequency of problems; however, do see changes in therapy at a faster rate than older children, whose externalizing symptoms are reported at a lower frequency at the start of treatment. Children with externalizing symptoms are not technically related to how the parents feel, which we can make the inference that parents do not feel a sense of agency for the presentation of their children's externalizing symptoms. We typically see this in the presentation of child symptoms and the parent-child relationship. When parents are inquiring treatment for externalizing disorders, such as ADHD, ODD, typically with the presentation of disruptive behaviors. BPT modalities, such as Parent-Child Interaction Therapy (PCIT), is typically recommended for children between ages 2-7 and their parents to help target these behaviors early in development. The first half of PCIT is attachment-theory focused, where it is heavily emphasized that building the parent-child relationships is what helps the parent set limits and manage non-compliance.

Because internalizing and externalizing symptoms tend to be correlated, we also tested the hypothesis with internalizing symptoms. Overall, there is a strong relationship between both externalizing and internalizing when controlling for parent efficacy across both age cohorts; however, parents report feeling more efficacious in managing child

internalizing symptoms in older children versus younger children. However, this effect is more important and relevant to note with internalizing where parents find themselves feeling more of a sense of agency in their involvement with their children with internalizing symptoms. They may blame themselves for their child's internalizing symptoms and blame their children for their externalizing behaviors.

We typically see this in the presentation of child symptoms and the parent-child relationship. When parents are inquiring treatment for externalizing disorders, such as ADHD, ODD, typically with the presentation of disruptive behaviors.

Limitations

One of the major implications of this study was the sample size. It was originally planned to do a lagged analysis to predict baseline symptoms onto parent variables by obtaining estimated slopes of BIL-Y reports at older and younger periods of reported externalizing symptoms. However, given that our sample size was cut in half we were not able to look at these changes longitudinally. When conducting a mixed effects regression model, the parameters made sense, but the error variance was not functioning properly; therefore, led to poor model convergence and analyses. Although causal direction of parent variables and child variables were not established by these analyses, regression analyses of baseline data did show different effects for externalizing symptoms.

There is an unusual pattern of parent report; therefore, father data was excluded from these analyses. The BIL-Y is typically completed from mother's perspective and rarely include the other parent's perspective, in addition to knowing that fathers typically reports on behalf for both parents. The child sample used was also restricted. Child self-

reports of symptoms were also excluded from this study due the not having self-report data for the children included in this study; therefore, we restricted to using parent-report measures only.

Future Directions

To look at the casual relationships between parent and child variables in more detail, more data is needed to be collected to extend into a longitudinal analysis.

Appendix A:
BIL-Y Subscales

CHILD DIFFICULTY:

- 2. My child and I don't get along very well
- 3. We argue a lot about rules and expectations
- 11. I often feel stressed as a parent
- 12. My child seems to be much harder to care for than most

PARENTING EFFICACY:

- 5. I give a fair warning to my child before disciplining misbehavior
- 7. My child knows my expectations for his or her behavior
- 13. I am successful most of the time when I try to get my child to do something
- 14. When I think about myself as a parent, I believe I can handle most things pretty well.

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