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Honors Thesis

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Advisor: Jackson A. Goodnight, Ph.D.

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Abstract

This study examines the relationship between one's older siblings' internalizing and externalizing problems and one's own relationship with one's parents in early adolescence. Previous research has indicated that sibling relationships are some of the most long-lasting and important relationships in an individual's life. Family research has also shown that there are situations in which children's internalizing and externalizing behaviors can shape their relationship with their parents. However, no previous research to my knowledge has explored whether one's sibling's behaviors influences one's own parent-child relationship. During this study, data from the United States Department of Labor and National Longitudinal Survey of Youth (NLSY79) as well as the Children of the National Longitudinal Survey of Youth (CNLSY) were analyzed. Siblings' externalizing and internalizing problems were evaluated through the Behavior Problems Index (BPI). The child's perception of parenting was evaluated based on four scales: Autonomy, Disharmony, Intimacy, and Joint Activity (Hart et al., 1999). Results indicated that when siblings are further apart in age, there was an association found between internalizing and externalizing behaviors and Joint Activities, resulting in the younger child spending less time with parents. Disharmony between parents and children was found to be only correlated with the child's own externalizing behaviors, not with a siblings' externalizing behaviors.

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Table of Contents

Abstract	Title Page
Introduction	1
Method	3
Results	4
Discussion	7
References	10

Introduction

Most households in the United State have children growing up with at least one sibling (Hernandez, 1997). Having siblings within the family structure has been proven to be greatly impactful in the social, emotional, and intellectual development of children (Cicirelli, 1995). Sibling relationships are also more likely to last longer than parent-child relationships (Cicirelli, 1995); therefore, sibling influence is something that should be valued when thinking about child outcomes.

Siblings, both older and younger, often view older siblings as a resource for support regarding issues both outside and within the household (Tucker, McHale, & Crouter, 2001). Although siblings can have positive impacts on their siblings lives and serve as supportive figures, they can also be an influence towards negative behaviors. In low-income households, sibling support can be strongly linked to positive social adjustment (Caya & Liem, 2010). Conflict between siblings is often a strong predictor of antisocial behavior in early adolescence (Criss & Shaw, 2005). In an observational study, researchers concluded that about 20% of sibling interactions in the early childhood years involved intense negative emotions, which is, importantly, much higher than parent-child interactions during the same period. However, siblings have very high levels of intense positive emotions in interactions (Dunn, Creps, & Brown, 1996, as cited in Dunn, 2002).

The emotional range of a sibling relationship, coupled with the duration of the relationship, seem to be especially impactful. Age difference has also been found to impact sibling relationships. Siblings with a smaller age gap have been shown to have increased conflict while siblings with a larger age gap are shown to be more satisfied with their sibling relationships (Furman & Buhrmester, 1985).

Parent-child relationships are often thought of as the most impactful relationships for socialization of a child (Maccoby, 1992). Parent's temperament and behavior can significantly influence the outcome of a child's socialization (Kochanska & Goffin, 2018). Positive parenting (warm temperament and positive expressivity), have been associated with low externalizing problems in children during adolescence (Eisenberg, et.al, 2005). Negative parenting (hostility, internalizing problems, distress, cold temperament), is thought to predict a higher likelihood of child behavioral problems (Morris, et.al., 2002). However, family research has also indicated that individual differences in children have an influence in shaping family interactions and relationships (Crouter & Booth, 2003). For example, there are indications that children's externalizing (i.e., aggressive and delinquent) behaviors can influence their parents' attitudes and behaviors (Kerr & Stattin, 2003). Childhood externalizing problems have been shown to predict negative parenting behaviors (Fite, et.al., 2006).

In terms of the impact of sibling relationships on parent-child relationships, there are mixed research findings. When parent-child relationships are controlled for, it appears that the quality of the sibling relationship is based on the overall adjustment of an older sibling (Coldwell & Dunn, 2005).

Taking into account the impactful relationship between siblings and family research about child-effects and parent child relationships, the current study explores whether an older sibling's internalizing (depression, anxiety, social isolation) and externalizing problems (delinquency, acts of violence, etc.) have an effect on one's own parent-child relationship. One's own emotional and behavioral problems will be

controlled for in order to isolate the sibling relationship to a youth's relationship with their parents.

Method

Participants

This study used data from participants in the National Longitudinal Survey of Youth (NLSY79), a longitudinal survey of 6,111 women from across the United States of America and consisted of annual surveys between 1979 and 1994 (Goodnight et al., 2016). The study also includes the Children of the National Longitudinal Survey of Youth (CNLSY), which as of 2014, consisted of 11,521 biological offspring of the female participants in the NLSY79 (Bureau of Labor and Statistics, 2017). All first and second born children provided data for this study.

Measures

The behavioral outcomes of the offspring are measured by analyzing the results of surveys, filled out by mothers of children between ages 4 and 9 called the Behavior Problem Index (BPI; Peterson & Zill, 1986). The BPI measures both internalizing and externalizing behavior problems of children. Internalizing behavior problems would be, for example, depression, anxiety, changes in mood, etc. Externalizing behaviors would be, for example, arguing, bad temper, not getting along with peers, irritability, etc. Mothers rate each of the 30 items related to internalizing and externalizing behaviors as *not true* (0), *sometimes true* (1), or *often or very true* (2). Past studies have found the BPI to have very good reliability ($\alpha = .88$; Baker, Keck, Mott, & Quinlan, 1993).

Perceptions of parenting were measured using surveys completed by first and second-born children. The quality of parenting from the perspective of youth were collected between ages 10-13 (Hart, Atkins, & Ford, 1999) and are evaluated based of

four scales: autonomy, disharmony, intimacy, and joint activity. The autonomy scale is composed of 4 items where children expressed their perceptions of the independence given to them by their parents (e.g., How much say do you have in making rules about...?). The scale valued responses from “no say at all” (0), to “a lot of say” (4). The autonomy scale has an $\alpha=0.62$. The disharmony scale was measured using four items that assessed children’s impression of household environment (e.g., How often do you and your parents argue?). Responses were values on a 3-point scale (“hardly ever” (1), “sometimes” (2), or “often” (3)). The disharmony scale has an $\alpha= 0.61$. The intimacy scale encompasses 6 items that are intended to measure closeness and psychological intimacy between parent and child (e.g., How close do you feel to your father?). This subscale is valued on a 4-point scale ranging from “not very close” (1), to “very close” (4). The intimacy scale has an $\alpha= 0.70$. The last scale, the joint activity scale, evaluates the involvement of parents in children’s lives using the time span of the past month (e.g., within the past month, have you gone on an outing together?) and also the past week, (e.g., within the past week, have you done an activity together?). Each “yes” response indicates parent-child engagement.

The study used multiple regression to examine the links and relations between sibling behavior and parent child relationship. The analysis is conducted in *SPSS*.

Results

Means, standard deviations, and ranges were calculated for family averages of the following variables: joint activities from ages 10-13, autonomy from ages 10-13, disharmony from ages 10 to 13, intimacy from ages 10-13, child’s internalizing behaviors

from ages 4 to 9, and child's externalizing behaviors from ages 4 to 9, and sibling age difference. The results are presented in Table 1.

Table 1

Descriptive Statistics

Measure	Mean	Standard Deviation	Range
Age Difference	3.82	3.03	0.00-27.00
Joint Activities (10-13)	0.51	0.24	0.00-1.00
Autonomy (10-13)	2.37	0.84	0.75-4.00
Disharmony (10-13)	1.6	0.53	1.00-3.00
Intimacy (10-13)	2.29	0.37	1.00-3.40
Internalizing Behavior (4-9)	0.3	0.25	0.00-1.90
Externalizing Behavior (4-9)	0.39	0.28	0.00-4.00

Correlations were calculated between the continuous variables. Significant correlations were found amongst most variables that were evaluated. Correlations are reported in Table 2.

Table 2

Correlations

Measure	1	2	3	4	5	6	7	8	9
1. Age Difference	-	-	-	-	-	-	-	-	-
2. Joint Activities 10-13	0.108*	-	-	-	-	-	-	-	-
3. Autonomy 10-13	0.11	0.131*	-	-	-	-	-	-	-
4. Disharmony 10-13	0.027	0.132**	0.297**	-	-	-	-	-	-
5. Intimacy 10-13	0.039	0.182**	0.52	0.001	-	-	-	-	-
6. Internalizing Behavior 4-9 Older Sibling	0.68**	0.001	0.045	0.097	-0.092	-	-	-	-
7. Internalizing Behavior 4-9 Younger Sibling	0.002	-0.018	0.076	0.087	-0.101	0.482**	-	-	-
8. Externalizing Behavior 4-9 Older Sibling	.042*	-0.015	0.045	0.072	0.153**	0.749**	0.447**	-	-
9. Externalizing Behavior 4-9 Younger Sibling	-0.026	-0.046	0.05	0.136**	-0.131*	0.448**	0.759**	0.464**	-

Note: ** $p < .01$;

* $p < .05$

Primary Analyses

Analysis included the following parenting criterion variables: Autonomy, Disharmony, Joint Activities, and Intimacy. The following predictors included in each analysis: externalizing/internalizing behaviors of the older siblings between ages 4-9 (z-score transformed), externalizing/internalizing behaviors of the younger sibling (z-score transformed), age difference between siblings (z-score transformed), and the interaction between sibling age difference and older sibling externalizing/joint activities model.

There were significant findings in the externalizing/joint activities model. Specifically, a larger age difference between siblings was associated with reduced joint activities for the younger sibling. There were also significant findings in the externalizing/disharmony model. Specifically, younger sibling's externalizing behaviors was associated with greater levels of disharmony in parental relationships with the younger sibling. Finally, a trend level effect was found in the externalizing/intimacy model. Older siblings externalizing behaviors were associated at the trend level with lower levels of intimacy in parental relationships with younger siblings. Results are shown in Table 3

Table 3

Effects of externalizing problems of younger and older siblings on parenting outcomes for younger siblings

Variable	Externalizing							
	Autonomy		Disharmony		Joint Activities		Intimacy	
	b	SE	b	SE	b	SE	b	SE
Externalizing 4-9 Older Sibling	0.011	0.059	0.006	0.039	0.011	0.018	-	0.027
Externalizing 4-9 Younger Sibling	-	0.047	0.074*	0.032	-0.001	0.014	-0.027	0.024
Age Difference	0.008	0.113	-0.022	0.076	-	0.033	0.083	0.052
Externalizing x Age difference	-	0.087	0.001	0.058	0.025	0.026	-0.018	0.042

Note: **p<.01; *p<.05; ^p<.10

There were significant findings in the joint activity model and age difference in the internalizing behavior analysis. Results are shown in Table 4. Specifically, larger age differences between siblings were associated with lower levels of parent-child joint activities reported by the younger sibling.

Table 4

Effects of internalizing problems of younger and older siblings on parenting outcomes for younger siblings

Variable	Internalizing							
	<u>Autonomy</u>		<u>Disharmony</u>		<u>Joint Activities</u>		<u>Intimacy</u>	
	b	SE	b	SE	b	SE	b	SE
Internalizing 4-9 Older Sibling	0.039	0.064	0.024	0.042	-0.01	0.019	-0.37	0.029
Internalizing 4-9 Younger Sibling	0.046	0.047	0.02	0.032	0.015	0.014	-0.21	0.025
Age Difference	-0.015	0.113	-0.021	0.076	0.085*	0.033	0.085	0.054
Internalizing x Age difference	0.05	0.088	-0.031	0.059	-0.01	0.026	-0.036	0.042

Note: ** $p < .01$; * $p < .05$

Discussion

The purpose of this longitudinal study was to explore the association between older siblings' internalizing and externalizing problems and on younger siblings' relationship with their parents. The study examined the effects four parent-child relationship outcomes: Joint Activities, Autonomy, Disharmony, and Intimacy. The age difference of the two siblings was also considered, along with the younger siblings' own history of externalizing and internalizing behaviors.

To my knowledge, there has not been a study that investigates the impact of sibling effects on parent-child relationships, however, there is significant prior research documenting the importance of both sibling relationships as well as parent-child relationships. The current study found a significant relationship between the externalizing behaviors of younger siblings and their own perceived disharmony between the younger sibling and their parents. This outcome is expected because in Kerr & Stattin (2003), the researchers concluded that children's externalizing behaviors and attitudes can significantly influence the attitudes and behaviors of parents as well. If the externalizing behavior is the younger child's own doing, there is expected to be increased turbulence and disharmony between the parent-child relationship.

There was also a significant relationship found between the age difference of the children and the joint activities on both the internalizing and externalizing scales. The current study produced evidence that a larger age gap between siblings leads to less

perceived joint activities between the parents and the younger child. This finding is somewhat inconsistent with prior research on sibling age gap. Furman and Buhrmester (1985) found that the larger the age gap between siblings, the more likely the siblings were to be satisfied with their relationship. Although the current study and the Furman & Buhrmester (1985) study are different, if the larger age gap between the siblings results in the younger sibling spending less time with the parent, that would suggest that there is less overall satisfaction regarding the younger sibling's relationship with their older sibling and their parent.

Lastly, there was a near significant relationship found between the externalizing behaviors of the older sibling and the perceived intimacy between the younger sibling and their parent. The current study found that if the older sibling presents higher levels of externalizing problems, there is a lower perceived intimacy between the younger sibling and their parents. No other effects of older siblings' behaviors on younger siblings' parent-child relationship were found.

The current study's design includes many strengths and limitations. The study's strengths are that it is a very large and nationally representative study which includes multiple siblings and is longitudinal. The longitudinal nature of the study is especially important because researchers can follow up on predictions as time continues. A limitation of the present study is that the alpha levels for the parenting measures are not especially strong. This means my parenting measures do not have a great history of reliability, which may have reduced the likelihood that the analyses would have detected effects on the parenting outcomes. Additionally, this study is a correlational study, meaning that there could be many unmeasured variables or confounds that are unknowingly influencing the results. For example, a child's internalizing or externalizing problems could be occurring because of their parent's own internalizing and externalizing problems. A parent's own problems could be the cause of the child's negative perception of their parental relationship, not that their older sibling has internalizing or externalizing issues as well.

Future research on this topic should include more variables that should be taken into account. For example, future studies might also consider average income or peer influences. I think it would also be important to further investigate trends in siblings'

perceptions of one another before investigating the influence their relationship has on their relationship with their parents. Another potential improvement in the study would be to control for parents' own delinquency problems in order to rule out that potential confound that exists within the current study.

Although the present study did not find strong evidence that older siblings' internalizing and externalizing behaviors have an effect on younger siblings' relationships with their parents, it did replicate previous research showing an effect of a child's own behavior problems on their relationship with their parent. Further, it produced a novel finding that a larger age gap between siblings is associated with less time spent between younger siblings and their parents.

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