

THE PENNSYLVANIA STATE UNIVERSITY
SCHREYER HONORS COLLEGE

DEPARTMENT OF HUMAN DEVELOPMENT AND FAMILY STUDIES

DO DIFFERENCES BETWEEN SIBLINGS' PERSONAL CHARACTERISTICS IMPACT
DIFFERENCES BETWEEN SIBLINGS IN THE PARENT-CHILD RELATIONSHIP?

CATHERINE EMILY KUHNS
Spring 2011

A thesis
submitted in partial fulfillment
of the requirements
for a baccalaureate degree
in Human Development and Family Studies
with honors in Human Development and Family Studies

Reviewed and approved* by the following:

Susan McHale
Professor of Human Development
Thesis Supervisor

Kathryn Hynes
Assistant Professor of Human Development and
Demography
Honors Adviser

* Signatures are on file in the Schreyer Honors College.

ABSTRACT

This study explored whether differences between siblings' personal characteristics (as measured in the domains of risky behavior, peer competence, and academic achievement) were linked to levels of intimacy in each sibling's mother- and father-child relationships. Participants were parents and first- and second-borns from 191 White, middle/working class families. OLS regression models that included measures of both adolescents' individual functioning and sibling differences in functioning as predictors produced significant results for linkages between sibling differences in risky behavior, peer competence and GPA and intimacy in parent-child relationships, with significant effects for four of twelve models. For example, firstborns who reported less risky behavior relative to their siblings reported higher intimacy in their relationships with their fathers. In most cases, however, the direction of this effect differed from what was predicted in showing that siblings with poorer functioning than their siblings reported more intimacy with parents. Results were discussed in terms of potential compensation processes.

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ACKNOWLEDGEMENTS

Dr. McHale—To her abundant wisdom and incredible dedication, without which this would not have been possible. She has inspired me to continue asking questions and never stop learning.

The members of the Family Relationships Project, especially Anna, Beth, and Christine for being endlessly willing to help guide me through this journey.

My family— The support you provide is unworlly. Your presence gives me the courage I need to spread my wings in the next chapter of life and the comfort in knowing you're always there. I love and appreciate you more each day.

To those who have supported me throughout my four years - I cherish the time I've spent with you, and can only hope to find as much joy and happiness in the memories. You've kept me sane, steady, and laughing, and for that I will always be thankful.

Background

In the context of the nuclear family, sibling relationships are the least studied but arguably one of the most important relationships. Not only are they one of the most long-lasting relationships in an individual's life, but they can also have lasting implications for individual development across the lifespan. Despite growing up in the same family, many studies show that siblings are no more similar to one another than they are to unrelated peers, including in their interests, personalities, and skills (Dunn & Plomin, 1991). Behavior geneticists point to the non-shared environment as the main cause for differences between siblings, including experiences in their family that are nonshared. Researchers have examined the processes that take place within the family context that create these differences between siblings; some of this work will be discussed below. It should be mentioned, however, that most researchers tend to look to parent-child relationship processes when explaining differences between siblings. The present study takes the innovative step of exploring how differences between siblings' personal characteristics, specifically, their academic achievement, peer competence, and risky behavior-- might explain differences between siblings' parent-child relationships. In the following paragraphs potential reasons for sibling differences will be explored to provide a basis for understanding how these differences might subsequently explain differences between siblings' relationships with their parents.

Alfred Adler's theory of Individual Psychology provides us with a starting point for understanding how differences between siblings can potentially emerge. Adler's theory is grounded in the idea that the family of origin and its subsystems of relationships play a critical role in development (Ansbacher & Ansbacher, 1956). In particular, Adler targeted the sibling relationship as an important context for various processes that shape the development of the

personality. Adler's theory focused heavily on how feelings of inferiority and power dynamics influence development and emphasized a democratic style of parenting in which children are treated equally within the family as the most effective way of preventing psychopathology.

Adler's theory targeted sibling rivalry as a key family dynamic. He posited that sibling rivalry was primarily due to the feelings of inferiority each sibling held in regard to competition for intangible parental resources like time, energy, and attention, as well as tangible family resources. Adler claimed that this rivalry, in part due to a child's emerging "inferiority complex," has negative effects for the individual's self-esteem and health across the lifespan if not dealt with properly in childhood. To avoid feelings of inferiority, Adler explained, siblings will differentiate from one another as a means of reducing competition. During this process, siblings participate in "niche-picking," a process that involves each sibling choosing an area in which to specialize and excel that is separate from that of their sibling. It is in this process of differentiation that differences between siblings may emerge.

A related process through which differences between siblings can emerge is described in social comparison theory (Festinger, 1954). Social comparison theory is based on the idea that we learn about ourselves and our abilities by comparing ourselves to those around us. Of those around us, one of the most convenient comparisons we can make is to individuals in our own families. In fact, research shows that individuals tend to compare themselves to those with similar backgrounds (Goethals & Darley, 1978; Miller, 1984; Suls, Martin & Wheeler, 2002). Social comparison theory has been applied to sibling relationships when studying the nuclear family, and parents may also compare their children against each other when evaluating their skills, abilities, and other personal qualities. The subsequent evaluation and identification of

differences between the two children (i.e. noticing relative strengths and deficiencies) can potentially elicit different parental behaviors toward the two siblings. For example, a child who performs above average at a given task may be overshadowed by their sibling who performs that same task extraordinarily well. In such cases, the above average sibling would in most families have their talent or skill nurtured and have their self-esteem enhanced in the process. However, in such families where two children are competent in the same domain, parents may choose to invest time and family resources in the child who performs better relative to their sibling. According to both Adlerian and social comparison perspectives, families in which this process occurs will leave the child who performs less well relative to their sibling with a decreased self-esteem that can lead to adjustment problems in the future.

The idea that siblings' differential treatment by parents helps to explain sibling differences is not a new one. Research points to differential treatment as a means to positive social and emotional well-being and adjustment for the favored sibling, with the opposite being true for the disfavored child (Dunn, Stocker, & Plomin, 1990; McHale & Pawletko, 1992). For example, one longitudinal study showed that youth who were disciplined more, relative to their sibling, showed more externalizing problems than their sibling three years later (McGuire, Dunn, & Plomin, 1995). Such findings are consistent with predictions from Adler's theory of individual psychology and from social comparison theory (Ansbacher & Ansbacher, 1956; Festinger, 1954). Importantly, parents cite their children's personal characteristics as reasons for differential treatment (Kowal & Kramer, 2004; McHale & Crouter, 2003). That is, because siblings are different, parents come to treat them differently and consequently develop archetypes of the parent-child relationship that is unique to each child.

Until now, studies have focused mainly on how differential treatment by parents elicits differences between siblings. In contrast, the present study explores how differences between siblings across three domains--academics, peer competence, and risky behavior-- may have implications for children's parent-child relationships. These three domains were chosen because they represent multiple dimensions of children's functioning.

The domain of *academic achievement* was chosen because it is a key focus of evaluation in childhood and adolescence. Colangelo and Brower (1987) found that children who had a sibling labeled by their teachers as academically gifted scored significantly lower than their gifted sibling on an academic self-esteem scale five years after the label was given. Their low academic self-esteem could potentially be a result of the transference and generalization of the sibling's "gifted" label into the family and the special regard and unique relationship that was created around the academic talent of the gifted child. Other research suggests that parents' beliefs about their child's academic competencies predict later academic choices and performance (Bleeker & Jacobs, 2004; Eccles-Parsons, Kaczala, & Meece, 1982; Jacobs & Eccles, 1992). This work has not examined sibling differences, but consistent with social comparison theory, parental beliefs that one of their children is less academically competent could have long term implications for that child's future academic achievements. Importantly, differences between siblings' school achievement may set such parental belief processes into motion.

Peer competence was chosen as a second domain of interest because of its links to mother and father acceptance (Kan & McHale, 2007). Although most studies focus on the role of parental acceptance in promoting peer competence, children who are highly competent within

their peer group also may elicit greater acceptance from their parents. We know that siblings can serve as a powerful influence for the development of social competencies (Dunn, 1983; Dunn & Munn, 1986; Tucker, Updegraff, McHale & Crouter, 1999; Whiteman, Bernard, & McHale, 2010) but research has not tended to taking into account the larger family context within which sibling influences operate. For example, it is unclear how a child reacts when his or her social competencies are in a direct comparison with their siblings' social competencies, including when such sibling differences are noticed and responded to by parents. Again, from a social comparison perspective, differences between siblings in regard to social competence may play a part in shaping each child's parent-child relationship.

As in the domain of peer competence, research on *risky behavior* shows us that siblings can influence each other in regard to the modeling of risky or delinquent activities and serve as gatekeepers for risky behavior (Rowe & Gulley, 1992; Windle, 2000). Most research points to older siblings as models of risky behavior, but as in other domains of youth functioning, the larger family contexts of sibling influence are rarely taken into account. For example, sibling differentiation processes may come into play if a child notices that his or her sibling who engages in risky behavior has a poor relationship with their parent(s), and this may motivate the child to avoid risky behavior. In turn, to the extent to which siblings are differentially involved in risky behavior, parents may begin to favor the child who behaves well with positive implications for their parent-child relationship. In sum, sibling dynamics emerge within a larger family context and may have implications for each siblings' parent child relationship. The primary goal of this study was to explore how the differences between siblings in the domains of risky behavior, peer competence, and academic achievement are linked to parent-child relationship qualities. In doing so, this study departs from prior research that has focused on the

role of parent-child relationships in fostering sibling differences, by examining the role of sibling differences in parent-child relationships. The overarching hypothesis is that, controlling for a child's own characteristics, sibling differences will explain unique variance in parent-child relationship characteristics, such that a child who exhibits better functioning than his or her sibling will experience a more positive parent-child relationship. Thus, in the domains of academic performance and peer competence, I predict that a child will experience more intimacy in their relationships with their mother and with their father if they have better abilities than their sibling. In the domain of risky behavior I predict that a child will experience more intimacy in their relationships with their mothers and fathers if they are lower in their levels of risky behavior relative to their sibling.

Methods

Sample

Data came from phase 7 of a longitudinal study of family relationships in middle childhood and adolescence. The participants included mothers, fathers, and first- and second-born adolescent-age siblings ($M = 17.34$ $SD = .79$ years of age for firstborn siblings; $M = 14.77$ $SD = 1.16$ year of age for second-born siblings) from $N = 191$ families. Recruitment of the sample occurred by sending letters home with all fourth and fifth grade students in 16 school districts in a northeastern state. Interested families returned a postcard to the project and were then contacted by project staff to assess if they met project criteria (families with always-married parents, a firstborn child in fourth or fifth grade, and at least one younger sibling who was two to three years younger). The demographic characteristics loosely reflected those of the region, which includes primarily European American working and middle class families, although the families tended to be somewhat higher in income and education level compared the rest of the region. There were 46 boy-boy sibling dyads, 47 boy-girl dyads, 50 girl-boy dyads, and 48 girl-girl dyads within the sample.

Procedures

Two or three interviewers travelled to families' homes and conducted interviews with mothers, fathers and the two siblings. At the beginning of the visit, interviewers reviewed the study procedures, obtained informed consent, and compensated the family (\$200). Following this orientation, each family member was interviewed separately. Mother and father interviews were practically identical, as were the interviews for the two siblings.

Measures

Parent-youth intimacy was rated by youth using an 8-item scale adapted from Blyth, Hill, and Thiel (1982) for the present study. Both siblings rated items (e.g. “How much do you go to your mother/father for advice/support?”) on a scale from 1 (*not at all*) to 5 (*very much*). Scores were then summed such that a higher score indicated more intimacy and warmth in the relationship. Experiences with mothers and fathers were rated at different time points in the interview. Cronbach’s alphas ranged from .85 to .87 for firstborns’ and second-borns’ ratings of intimacy with mother and father.

Each sibling’s grades were obtained from the most recent report card to assess *academic achievement*. Grades in Math, English, Social Studies/History, and Science were recorded on a 5-point scale ranging from *A* to *E*. These ratings were averaged to create a composite measure for overall academic performance in school such that higher scores indicated higher academic achievement.

Each youths’ perceived *peer competence* was assessed using a self-report 5-item subscale of Harter’s (1982) Self Perception Profile. For this measure, youth are presented with two descriptions of a “teenager” (one positive, one negative) and are asked to decide which teenager is most like themselves (e.g. “Some teenagers have a lot of friends,” but “Other teenagers don’t have very many friends”). Then youth were asked to decide if the statement was “*sort of true*” about them or “*really true*” about them. Scores across the five items were averaged such that a

lower score indicated lower perceived peer competence. Total scores could range from 1 to 4. Cronbach's alphas were .81 and .77 for first- and second-borns' reports, respectively.

Risky behavior was measured using a scale adapted from the Michigan Study of Adolescent Life Transitions (Eccles & Barber, 1990). This 18-item index was given to both adolescents to assess the extent of their involvement in activities such as "skip school," "use drugs or alcohol," and "lie to parents about something important." Siblings were asked to rate the frequency with which they engaged in each behavior on a 4-point scale ranging from 1 (*never*) to 4 (*more than 10 times*) in the past year. Scores were then summed such that a higher score indicated elevated risky behavior. Total scores could range from 18 to 57. Cronbach's alphas were .88 for both first- and second-borns' reports.

Results

Descriptive data on gender differences and sibling differences in each of the three areas of functioning are first provided. Then, the results of regression analyses testing the study hypotheses are presented.

Preliminary Analyses

To describe gender differences and the extent and nature of differences between siblings in each domain, repeated measure analyses of variance (ANOVA) were first conducted. Results indicated that in the domain of risky behavior, firstborns and boys scored higher than second-borns and girls (see Table 1). In the domain of academic achievement, the results revealed sex differences such that girls scored higher than boys, but the birth order effect, though it favored firstborns, was not significant. In the domain of peer competence, boys scored higher than girls, and again, the birth order difference was not significant (though it favored firstborns). Finally, the results for risky behavior indicate that a sex difference favoring boys emerged for firstborns but there was not a significant sex difference for second-borns. Here the birth order effect was significant, such that firstborns reported more risky behavior, on average, than did second-borns.

Table 1. Sex differences for firstborns (FB) and second-borns (SB) and absolute values of sibling differences (Sib diff)¹ in GPA, peer competence and risky behavior

		Mean	SD	Range
GPA	FB girl	3.39	0.65	2.50
	FB boy	3.24	0.74	3.00
	SB girl	3.24	0.79	3.75
	SB boy	3.20	0.73	3.00
	Sib diff	0.08	0.79	5.50
Peer Competence	FB girl	3.13	0.63	3.0
	FB boy	3.19	0.50	2.0
	SB girl	3.14	0.60	2.6
	SB boy	3.16	0.57	2.2
	Sib diff	-0.004	0.77	4.20
Risky Behavior	FB girl	26.52	7.77	33.0
	FB boy	29.40	9.14	39.0
	SB girl	24.57	7.88	36.0
	SB boy	24.56	5.24	26.0
	Sib diff	3.41	9.17	70.0

¹Directional difference scores indicate that on average, firstborns scored higher in GPA and risky behavior and second-borns scored higher in peer competence.

Links between Youth and Sibling Functioning and Parent-Child Intimacy

Next, OLS regression analyses were used to explore the link between differences between two siblings across the three domains and the parent-child relationship. Each model was run separately for firstborns' and second-borns' intimacy with mothers and fathers as predicted by academic achievement, peer competence and risky behavior (12 models in all). For these analyses, difference scores for firstborns were created by subtracting second-borns' reports of their functioning from firstborns' reports so that a positive score would always mean a higher level of performance in the given domain. Likewise, difference scores for second-borns were created by subtracting firstborns' reports of their functioning from second-borns' reports. The target youth's sex and the sex constellation of the sibling dyad (same sex; mixed sex dyad) also were factors in the models. Of the 12 models, four difference scores emerged as significant. Results revealed an association between GPA and second-born youths' intimacy in the father-child relationship ($B= 3.06, SE=.73, p <.0001$). The difference score for second-borns was also significant; $B= -1.76, SE=.69, p <.05$, and the overall model was significant $R^2=.13, p<.0005$ indicating that when second-borns perform lower academically relative to their sibling, they experience more intimacy with their father. This relation is not consistent with the hypothesis of this study. No models including firstborns or mothers yielded significant findings.

Findings also revealed a relation for firstborn youth between peer competence and intimacy in the mother-child relationship ($B= 3.68, SE=.90, p <.0001$). The difference score for firstborns was also significant, $B = -1.58, SE = .66, p <.05$, and the overall model was significant, $R^2 = .14, p <.0001$ indicating that when a firstborn is less competent in peer interactions relative to their younger sibling, they have more intimacy in their relationship with their mother. This

association was not consistent with the hypotheses of this study. No models including second-borns or fathers yielded significant findings.

Finally, results of the regression analyses regarding risky behavior revealed relations between intimacy with father and the risky behavior of second-borns ($B = -0.28$, $SE = .06$, $p < .0001$). For firstborns, the difference score was also significant: $B = -0.21$, $SE = .06$, $p < .01$, and the overall model was significant; $R^2 = .17$, $p < .0001$, indicating that, consistent with the study hypothesis, when firstborns are less risky in their behavior relative to their sibling, they have greater intimacy in their relationships with their fathers. For second-borns, the difference score also was significant as well; $B = 0.15$, $SE = .05$, $p < .01$, and the overall model was significant; $R^2 = .12$, $p < .0005$ suggesting that when second-borns are more risky in their behavior relative to their sibling, they have more intimacy in their relationship with their father, an effect that was not consistent with the study hypothesis. No models including mothers yielded significant findings.

In sum, findings emerged across all three domains although three of the four were contrary to the proposed hypotheses. Three of the four findings involved the father-child relationship and first- and second-born siblings each had two significant findings, with an overlap in the domain of risky behavior. While findings were in general inconsistent with the proposed hypotheses, they do suggest that importance of sibling differences in each youth's relationship with his or her parents. Possible reasons why the direction of the associations was different than expected will be discussed in the following paragraphs.

Discussion

This study explored the differences between two siblings in the same family across the domains of academic achievement, peer competence and risky behavior and tested the hypothesis that these differences have implications for the parent-child relationship. Three main hypotheses were tested: that beyond the effects of their individual functioning on their parent-child relationships, siblings who reported higher levels of academic achievement relative to their sibling would have greater intimacy in their relationship with their parents, siblings who reported higher levels of peer competence relative to their sibling would have greater intimacy in their relationships with their parents, and siblings who reported lower levels of risky behavior relative to their sibling would have greater intimacy in their relationship with their parents. Difference scores were used to assess the level of difference between firstborns and second-borns, and four of the twelve models yielded significant results, but three of the four models yielded results that contradict the hypotheses.

In the domain of risky behavior, results indicated that firstborn youth who reported lower levels of risky behavior relative to their younger sibling experienced more intimacy in their relationship with their father. Contrastingly, second-borns who reported higher levels of risky behavior relative to their firstborn siblings experienced more intimacy in their relationships with their father. In the domain of peer competence, firstborns who reported less peer competence relative to their younger siblings experienced more intimacy in the parent-child relationship. In the domain of academic achievement, second-borns who reported lower levels of academic achievement relative to their older siblings experienced greater intimacy in their relationship with their fathers.

In the following sections I will discuss how this study relates to the body of literature regarding sibling differences and parent-child relationships and suggest possible directions for future research. In considering these findings, readers should be mindful that the sample is made up of predominantly white, two-parent, working and middle class families, with the youth achieving above average in each domain assessed. Preliminary descriptive statistics show that even those youth who are not considered successful relative to their siblings are still doing well relative to the greater population. Also, differences between children in the same family can be received by parents differently across different cultures and contexts. It is therefore not possible to generalize these findings across ethnicity and culture.

In the domain of academic achievement, results indicated that second-borns who exhibited lower academic achievement relative to their firstborn counterparts reported more intimacy in their relationships with their fathers. As with firstborns in the domain of peer competence, it is possible that in an attempt to battle the inferiority complex as posited by Adler, second-borns who achieve less academically compared to firstborns behave in ways towards their father that might elicit more intimacy. Social comparison theory could also be applied to explain this finding in that fathers might notice one of their children exhibiting a lower performance in the academic arena in comparison to their sibling. If such a situation occurs, fathers might attempt to reach out to the lower performing child, thus increasing intimacy in their relationship. Taken together, these findings, although mostly inconsistent with the proposed hypotheses of the study, provide important background information for the continued study of how differences in personal qualities emerge in siblings and how they potentially affect the parent-child relationship. The results also indicate that sibling differences were still significantly associated with parent-child relationships beyond what was explained by the child's behavior.

Furthermore, the findings of this study indicate there are not necessarily negative implications for the parent-child relationship if youth perform lower in a given domain relative to their sibling.

In the domain of peer competence, firstborns who reported being less socially competent than their younger siblings reported higher levels of intimacy in their relationship with their mothers. Firstborn gender and the gender constellation of the sibling dyad were significant correlates of peer competence, such that boys were higher on average in this domain. This finding contradicts the study hypothesis. Once again, a compensatory model can be used to explain this finding. Previous research has shown that even if a child has more negative relationships with their peers because of low social competence, a warm relationship with their mother predicts more positive adjustment (Stocker, 1994). In this case, firstborns may use their high intimacy relationship with their mother to compensate for their low peer competence. It is important to note that firstborns may still be competent in their peer relationships despite being less competent relative to their younger sibling. In addition to the compensatory model, it is possible that firstborns notice the difference in peer competence levels between themselves and their younger sibling and make efforts to increase the intimacy in their relationship with their mother in an attempt to overcome feelings of inferiority to their more socially competent sibling. However the direction of that relationship is questionable, and it is possible that mothers may notice their firstborns lagging in peer competence relative to their younger siblings and attempt to create a closer relationship, thus supporting the differential treatment explanation.

When looking at the domain of risky behavior, across the sample firstborns (and in particular firstborn males) reported the highest levels of risky behavior. This finding is similar to

previous research (e.g. Gosrau-Breen, Kuntsche, & Gmel, 2010) that labels older youth and males as typically engaging in higher levels of risky behavior. Firstborns also reported having increased intimacy in their relationship with their father if their risky behavior was lower relative to the behavior of their younger sibling. This finding agrees with the study's original hypothesis and potentially supports the notion that the less risky behavior a child exhibits the more highly he or she will be regarded by a parent. For second-borns, however, results indicate that this may not be the case. Second-borns who reported higher levels of risky behavior relative to their firstborn counterparts also reported more intimacy in their relationships with their fathers. A compensatory model, which posits that a positive relationship (typically with a member from the nuclear family) can compensate for other more negative relationships and behaviors (Stocker, 1994) can be used to explain this result. It is possible that in this case, second-borns are able to maintain a high amount of intimacy in their relationship with their father that compensates for their tendency to engage in risky behavior. Also, because males are more likely to engage in risky behaviors compared to females, fathers (as opposed to mothers) might be more likely to notice a particular child engaging in risky behaviors and make an attempt to increase the intimacy in his relationship with that child to deter him or her away from engaging in risk-taking activities.

While findings for first- and second-borns differ in regard to the domain of risky behavior, they do provide us with insight into how being different from your sibling in a potentially more dangerous domain of behavior affects the parent-child relationship. It is important to note, however, that risky behavior may not necessarily be a predictor of poor functioning. Some studies show that increased popularity and peer competence are linked to an increase in risky behavior (Mayeux, Sandstrom, & Cillessen, 2008). Also, the risky behavior

scale covers a spectrum of risky behaviors that when summed may not be an accurate portrayal of how problematic an individual is in their behavior. Especially in this sample it is worth noting that the mean for even older boys ($M = 29.40$) was relatively low. Finally, it is important to note that parents may not be aware just how much risky behavior their children are exhibiting. If parents were made aware just how risky each youth was in their behavior, levels of intimacy in the parent-child relationship might be different thus altering the pattern of results.

It is important to note that due to the design of this study, inferences of causality are not possible and the direction of the proposed findings may be in the opposite direction. Also, this study used only youth reports of every measure except academic achievement, so it is possible that youth may have perceived themselves as higher or lower in a given domain than they actually were. For future research, the design of this study could have been improved by using firstborn and second-born data from different waves of the study to compare both first-and second-borns on any given domain when they were the same age. Through the use of multiple waves of data, a clearer picture may have emerged.

In sum, most research focuses on how processes within the parent-child relationship affect differences between siblings, whereas the present study explored how differences between siblings' personal characteristics may have affected each sibling's parent-child relationships. Future research should continue to explore the direction of these effects and can add to the body of existing work on family processes and dynamics by approaching parent-child processes from a new angle.

References

- Ansbacher, H. L., & Ansbacher, R. R. (1956). *The individual psychology of Alfred Adler*. New York: Basic Books.
- Blyth, D., Hill, J., & Thiel, K. (1982). Early adolescents' significant others; Grade and gender differences in perceived relationships with familial and nonfamilial adults and young people. *Journal of Youth and Adolescence, 11*, 425-450.
- Colangelo, N., & Brower, P. (1987). Gifted youngsters and their siblings: Long-term impact of labeling on their academic and personal self-concepts. *Roeper Review: A Journal on Gifted Education, 10*(2), 101-103.
- Conger, R. D., & Reuter, M. A. (1996). Siblings, parents, and peers: A longitudinal study of social influences in adolescent risk for alcohol use and abuse. In G. E. Brody (Ed.), *Sibling relationships: Their causes and consequences* (pp. 1-30). Norwood, NJ: Ablex Publication Corporation.
- Dunn, J. (1983). Sibling relationships in early childhood. *Child Development, 54*, 787-811.
- Dunn, J., & Munn, P. (1986). Sibling quarrels and maternal intervention: Individual differences in understanding and aggression. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 27*, 583-595.
- Dunn, J. & Plomin, R. (1990). *Separate lives: Why siblings are so different*. New York: Basic.
- Dunn, J., Stocker, C., & Plomin, R. (1990). Nonshared experiences within the family: Correlates of behavioral problems in middle childhood. *Development and Psychopathology, 2*(2),

113-126.

Eccles, J. & Barber, B. (1990). *The risky behavior scale*. Unpublished measure, The University of Michigan.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7, 117-140.

Goethals, G. R., Darley, J. M., & Kriss, M. (1978). The impact of opinion agreement as a function of the grounds for agreement. *Representative Research in Social Psychology*, 9(1), 30-42.

Gossrau-Breen, D., Kuntsche, E., & Gmel, G. (2010). My older sibling was drunk—Younger siblings' drunkenness in relation to parental monitoring and the parent–adolescent relationship. *Journal of Adolescence*, 33(5), 643-652.

Harter, S. (1982). The Perceived Competence Scales for Children. *Child Development*, 53, 87-97.

Kan, M. L., & McHale, S. M. (2007). Clusters and correlates of experiences with parents and peers in early adolescence. *Journal of Research on Adolescence*, 17(3), 565-586.

Kowal, A. K., Krull, J. L., & Kramer, L. (2004). How the differential treatment of siblings is linked with parent-child relationship quality. *Journal of Family Psychology*, 18(4), 658-665.

Mayeux, L., Sandstrom, M. J., & Cillessen, A. H. N. (2008). Is being popular a risky proposition? *Journal of Research on Adolescence*, 18(1), 49-74.

- McGuire, S., Dunn, J., & Plomin, R. (1995). Maternal differential treatment of siblings and children's behavioral problems: A longitudinal study. *Development and Psychopathology*, 7(3), 515-528.
- McHale, S. M., & Crouter, A. C. (2003). How do children exert an impact on family life? In A. C. Crouter & A. Booth (Eds.), *Children's influence on family dynamics: The neglected side of family relationships* (pp. 207-220). Mahwah, NJ: Erlbaum.
- McHale, S. M., & Pawletko, T. M. (1992). Differential treatment of siblings in two family contexts. *Child Development*, 63(1), 68-81.
- Miller, C. T. (1984). Self-schemas, gender, and social comparison: A clarification of the related attributes hypothesis. *Journal of Personality and Social Psychology*, 46(6), 1222-1229.
- Rowe, D. C., & Gulley, B. L. (1992). Sibling effects on substance use and delinquency. *Criminology*, 30, 217-233.
- Rutter, M. (1979). Protective factors in children's responses to stress and disadvantage. In M. W. Kent & J. E. Rolf (Eds.) *Primary prevention of psychopathology, 3. Social competence in children*. Hanover, NH: University Press of New England.
- Smetana, J.G. (1988) Concepts of self and social convention: Adolescents' and parents reasoning about hypothetical and actual family conflicts. In M.R. Gunnar & W.A. Collins (Eds.) *Minnesota Symposia on Child Psychology, Vol.21: Development during the transition to adolescence* (pp. 79-122). Hillsdale, NJ: Lawrence Erlbaum Associates.

- Stocker, C. M. (1994). Children's perceptions of relationships with siblings, friends, and mothers: Compensatory processes and links with adjustment. *Journal of Child Psychology and Psychiatry, 35*(8), 1447-1459.
- Suls, J., Martin, R., & Wheeler, L. (2002). Social comparison: Why, with whom and with what effect? *Current Directions in Psychological Science, 11*, 159-163.
- Tucker, C. J., Updegraff, K. A., McHale, S. M., & Crouter, A. C. (1999). Older siblings as socializers of younger siblings' empathy. *The Journal of Early Adolescence, 19*, 176-198.
- Whiteman, S. D., Bernard, J. M., & McHale, S. M. (2010). The nature and correlates of sibling influence in two-parent African American families. *Journal of Marriage and Family, 72*, 267-271.
- Windle, M. (2000). Parental, sibling, and peer influences on adolescent substance use and alcohol problems. *Applied Developmental Science, 4*, 98-110.

ACADEMIC VITA of Catherine Kuhns

Catherine Kuhns
601 Ridge Avenue
State College, PA 16803
catherinekuhns@gmail.com

Education: Bachelor of Science Degree in Human Development and Family Studies, Penn State University, Spring 2011
Honors in Human Development and Family Studies
Thesis Title: Do Differences Between Siblings' Personal Characteristics Impact Differences Between Siblings in the Parent-Child Relationship?
Thesis Supervisor: Susan McHale

Related Experience:
Research Assistant, The Family Relationships Project
Teaching Assistant, Infant and Child Development

Grants Received:
Schreyer Travel Ambassador Grant

Public Service:
Penn State IFC/Panhellenic Dance MaraTHON
Big Brother Big Sister Volunteer

Awards: Dean's List, Fall 2007, Fall 2008—Fall 2010

Professional Memberships:
Member, Phi Kappa Phi