

An Investigation of the Connection between Parenting Styles, Birth Order, Personality, and Sibling Relationships

Michele Van Volkom¹, Danielle Dirmeitis² & Samantha Cappitelli³

Abstract

The purpose of the current study was to examine the potential effects of parenting styles and birth order on personality and sibling relationships. Two hundred forty-seven participants completed a demographics questionnaire as well as the Lifespan Sibling Relationship Scale (LSRS) to measure affect, behavior, and cognitions associated with the sibling relationship in both childhood and adulthood. They also completed the Big Five Inventory (BFI) as well as reported on which parenting style their mother and father engaged in while they were growing up. Birth order had no significant effect on any of the aspects of the sibling relationship, but did show differences in conscientiousness and neuroticism. Other significant results were the finding that father's parenting style impact all six areas assessed by the LSRS. Authoritative fathers led to more positivity in assessing the relationship with the sibling the participants felt closest to in their lives. Mother's parenting style affected participants' view of the sibling relationship similarly, but only for adult and child cognitions. Implications of these findings will be discussed, including support for the notion that authoritative parenting results in the most positive outcomes for offspring.

Keywords: sibling relationships, birth order, parenting styles, personality

1. Introduction

Although everyone has different individual family experiences, do people of the same birth order cohort have innate similarities in their personalities and self-perceptions? Does birth order have an effect on sibling relationships in emerging adulthood? To understand why people, specifically siblings, behave certain ways and take over certain roles in the family, it is important to examine the topic of birth order. The first purpose of this paper is to examine the idea that birth order has an effect on people's personalities, relationships (especially with siblings), and life experiences. It also aims to examine the potential effect of various other demographic factors, such as parental marital status and gender, on personality and adult sibling relationships. A final topic to be discussed is the different types of parenting styles one experiences while growing up and the impact that may have on personality and sibling relationships among adults. Specifically, the main topics that will be discussed in this paper are the links between birth order and personalities, sibling relationships, and the effects of parenting styles on siblingships.

1.1 The Link between Birth Order and Personality

The theory that there is a connection between a person's birth order and his or her personality is often studied. For example, Szobiova (2008) focused on the Big Five while studying birth order. Many of her results were significant, including the fact that second born children tend to display more creativity and originality than the other birth orders.

¹ Lecturer, Department of Psychology, Monmouth University, 400 Cedar Avenue, West Long Branch, NJ 07764
E-mail: mvanvolk@monmouth.edu. 732-263-5479 (Phone); 732-263-5159 (Fax)

² Department of Psychology, Monmouth University, 400 Cedar Avenue, West Long Branch, NJ 07764

³ Department of Psychology, Monmouth University, 400 Cedar Avenue, West Long Branch, NJ 07764

Other researchers, such as Loona and Khan (2016), decided to take a more direct look at certain variables. In this case, they focused on self-compassion levels and its relationship to procrastination, while also looking at the effects of birth order. While they did not find a significant difference between first born and last born students on their levels of procrastination, it was found that the lower a person's self-kindness is, the more likely they are to procrastinate.

Rather than using self-report measures to study birth order, other researchers have asked participants to rate which personality traits they believe to be linked with each ordinal position (Herrera, Zajonc, Wiczkowska, & Cichomski, 2003). Middle born children were rated as being the most envious and the least bold by the other birth orders. The middle born participants conclusively rated themselves low on the bold scale as well (Herrera et al., 2003). Nyman (1995) also took the route of looking at people's perceptions of the different birth order positions. He found that the first born birth position was rated as most favorable over all the other positions. First born children were also rated as independent, intelligent, and responsible, however, they were also seen as spoiled. Black, Devereux, and Salvanes (2011) conducted an exploratory study on the relationship between birth order and IQ levels. They found that later born children tend to have lower IQs than earlier born children. It has also been discovered that last born children rated their need for dependency significantly higher than the other birth orders (Ali & Aslam, 2011). This shows that youngest children tend to be more dependent on those around them. On the other hand, some researchers have found no link between birth order and personality (McGuirk & Pettijohn, 2008; Srivastava, 2011). While personality is a major focus when studying birth order, other areas, such as sibling relations, are also examined considerably.

1.2 Birth Order and Sibling Relationships in Emerging Adulthood

The type of sibling relationship in emerging adulthood may be dependent on birth order. Most siblings stay in contact with each other when entering adulthood because they are family and because they have found a support system in each other (Myers, 2011). First born children tend to feel more emotionally close with their siblings than the other birth orders (Van Volkom, Guerguis, & Kramer, 2017). Tucker, Barber, and Eccles (1997) examined the reasons that siblings communicated; they hypothesized that different birth order positions would have different motives. Second born children reported receiving more advice, support, and influence from their siblings caused them to speak to their siblings significantly more than the other ordinal positions.

Other researchers decided to focus on one area to study. For example, Martin, Anderson, and Rocca (2005) focused on the relationship between sibling relations and verbal aggression. They found that verbal aggression between siblings resulted in a decrease in trust and communication satisfaction. There was a negative correlation between verbal aggression and perceptions of sibling character, competence, and caring. Myers (2015) conducted a study in which he examined participants' relationship and communication styles. He found that siblings who have an intimate relationship used affectionate communication more than the other types, saw it as more important, and considered it more appropriate than the other communication styles.

1.3 The Effect of Birth Order on Perceptions

Another direction some research has taken is investigating people's perceptions of themselves and the different birth orders. After asking participants to rate the birth orders on personality traits, Herrera et al. (2003) found that first borns were rated the most intelligent and responsible but the least emotional and creative. Last borns, on the other hand were rated as high in creativity and emotionality but low in responsibility. First borns are also considered to hold the highest occupational prestige (Herrera et al., 2003). Middle children tend to rate themselves as more aggressive than the self-perceptions of the other ordinal positions (Van Volkom et al., 2017). A study done by Stewart (2004) focused on the biases of clinicians when the birth order of their patients is known. It was found that the clinicians attributed stereotypical characteristics to first, middle, and only children after reading a vignette where only the child's birth order position was switched. For example, the clinicians viewed the only child as the most likely to experience problems even though all the vignettes were the same. This shows that biases do not stop in the professional world; people will always have subconscious stereotypes for the birth orders.

1.4 The Importance of the Sibling Dyad and Birth Order

Previous research has focused on the sibling dyad when looking at birth order. For example, Rocca, Martin, and Dunleavy (2010) focused on the types of relationships the different sibling dyads experience. They found that sister-sister sibling dyads communicated for inclusion.

They also found that first born children reported communicating more for control while the other birth order positions reported communicating for pleasure, inclusion, and relaxation (Rocca et al., 2010). It has been found that men who grew up with a sibling of the same sex are significantly more extraverted while women who grew up with a sibling of the same sex are significantly more conscientious (Szobiova, 2008; Tucker et al., 1997). Instead of using adults as the participants, Barnes and Austin (1995) used children. Female participants with a female sibling reported that they exerted more warmth towards their sibling than females with a male sibling (Barnes & Austin, 1995). Sister-sister sibling dyads experience more warmth, intimacy, and emotional support while brother-brother sibling dyads experience more self-defeating humor (Welecka-Matyja, 2017). Women are also more likely to facetime their siblings than men are (Van Volkom et al., 2017). This may be due to society's double standards that women can show emotions while men should not engage in outward emotional expression. Beyond birth order and personality traits, it is important to examine parenting styles and how they also might impact personality as well as the relationship between siblings, which is a main focus of the current study.

1.5 The Connection between Parenting Styles and Sibling Relationships

Although the original work was published decades ago, Baumrind (1971) is considered the pioneer of parenting style studies. Parenting styles are defined as the strategies that are regularly used by parents as they raise their children (Sruthy & Naachimuthu, 2017). The 4 main parenting styles result from a combination of how warm and responsive a parent is while also examining the demands made on a growing child. Authoritative parenting styles are seen as the goal, leading to the best outcomes, both in terms of psychological health and behavior, for offspring (Piko & Balázs, 2012). This style involves making demands on the child, but also showing warmth in communication with the child. While an authoritarian parent also makes demands on his/her child, they are low in warmth. Permissive parents have the warmth component, but do not make demands on the child. Finally, the uninvolved parent is a neglectful one, offering neither demands on, nor warmth toward, their child.

Looking at parenting styles is an underrepresented way to study family relations. Portner and Riggs (2016) found that greater parental care is associated with more positive sibling relationships. A study on adolescents showed that when compared with authoritarian or neglectful parenting, higher levels of closeness with a sibling was reported when authoritative parenting was used (Milevsky, Schlechter, & Machlev, 2011). Studies with children have also suggested that positive parenting is associated with more positivity in the relationship between siblings (Brody, Stoneman, & McCoy, 1992). Yu and Gamble (2008) further discussed how positive parenting, which involves warmth, can improve the quality of sibling relationships as well.

Parental care has a greater impact on sibling relationships than is universally believed, especially if there is conflict in the family. Knight et al. (2000) looked at parenting styles and connected versus separate knowing. Permissive fathers were positively correlated to separate knowing while authoritative fathers were negatively correlated to separate knowing. This link between parenting styles and the type of communication families have shows an underlying facet to family relations; parenting styles have a direct link to the type of communication a parent has with their children. When looking at birth order, first born children had significantly higher scores on separate knowing than later borns (Knight et al., 2000).

1.6 The Present Study

The majority of previous research has focused on the relationship between birth order and personality traits, mostly using self-report measures. This research has shown that the different birth order positions have varying traits that are associated with them (e.g., Herrera et al., 2003). With that being said, there has been much variation between the different studies; some birth orders are reported to have certain traits in one study and different traits in another. Researchers have also focused on sibling relationships in emerging adulthood depending on birth order. They have looked into the reasons for communication and factors that may strengthen or weaken sibling relationships (e.g., Myers, 2015). Finally, there is some work on the effect of parenting on sibling relationships, but the samples have been comprised of mostly children and adolescents (e.g., Brody et al., 1992). To build on what is already known, the purpose of the present study was to further investigate the effects that parenting styles have on adult sibling relationships, considering this topic is seldom examined. The researchers also set out to determine how parenting styles, birth order, and personality are linked among an adult (college student) sample.

Finally, the researchers conducted exploratory analyses to uncover possible links between other demographic factors (e.g., parental marital status, participant residential status) and their potential impact not only on personality, but sibling relationships in adulthood, an area that has not really been studied to date.

2.Method

2.1 Participants

A total of 247 (45 men and 202 women) college students participated in the current study. Ages ranged from 18 to 30, with a mean age of 19.24 ($SD = 1.41$). The majority of participants were of European American ethnicity (68.4%), in addition to 11.7% reporting multi-ethnic backgrounds, 10.5% reporting Hispanic American backgrounds, 4.9% reporting African American backgrounds, 4% reporting Asian American backgrounds, and .4% reporting "other". Among the participants, 167 had married parents, 59 had divorced parents, 9 had a widowed parent, and 12 had separated parents. One hundred and thirteen participants were the youngest child, 41 were the middle child, and 93 were the oldest child in their family. Participants reported between 1 and 9 total siblings, with the mean number of siblings being 1.96. Eleven participants were a twin, 17 participants had stepsiblings, 54 participants had half siblings, and 5 had adopted siblings. Residential status for participants was as follows: 62.3% lived in residence halls, 12.6% lived off campus, and 25.1% lived at home and commuted to school. Reported parenting styles for mothers were: 224 authoritative, 4 authoritarian, 13 permissive, 3 uninvolved, and 3 did not have their mother as part of their lives. Reported parenting styles for fathers were: 165 authoritative, 27 authoritarian, 30 permissive, 14 uninvolved, and 11 did not have their father as part of their lives. Participants were recruited via the Department of Psychology participant pool and received credit toward their class research requirement.

2.2 Materials

Materials for this study included a demographic questionnaire, a questionnaire designed to assess sibling relationships, and a personality questionnaire.

2.2.1 Demographic questionnaire. This measure was designed for the purposes of the current study. It asked participants to report their age, sex, ethnic background, parents' marital status, birth order, total number of siblings, and residential status. Participants were also asked if they were a twin and if they had any step, half, or adopted siblings. The final items on the demographic questionnaire asked participants to choose the option that best represented their mother's parenting style growing up as well as their father's parenting style growing up. These questions gave participants the option of "N/A", or, in other words, the parent was not in their lives growing up.

2.2.2 Lifespan sibling relationship scale (LSRS). This measure, created by Riggio (2000), contains 48 items and includes six subscales (Adult Affect, Adult Behavior, Adult Cognition, Child Affect, Child Behavior, and Child Cognition). It is designed to measure positivity, feelings, and beliefs about the sibling relationship in both childhood and adulthood (i.e., currently). Participants responded on a 5-point scale (1 = *strongly disagree*; 5 = *strongly agree*). A sample Adult Affect question was "I admire my sibling". A sample Adult Behavior question was "I presently spend a lot of time with my sibling". A sample Adult Cognition question was "My sibling is very important in my life". A sample Child Affect question was "I remember feeling very close to my sibling when we were children". A sample Child Behavior question was "My sibling and I often played together as children". A sample Child Cognition question was "My sibling and I had a lot in common as children". All Cronbach's alphas for the six subscales ranged from .84 to .91, with an alpha of .96 for the total LSRS (Riggio, 2000). If participants had more than one sibling, they were instructed to answer the questions based on the sibling that has had the greatest impact on their lives.

2.2.3 Big five inventory (BFI). This 44-item measure, created by John and Srivastava (1999), measures the five dimensions of personality (extraversion, agreeableness, conscientiousness, neuroticism, and openness). Participants responded to various characteristics related to the big five on a scale where 1 = *disagree strongly* and 5 = *agree strongly*. A sample extraversion item was "I see myself as someone who is talkative". A sample agreeableness item was "I see myself as someone who likes to cooperate with others". A sample conscientiousness item was "I see myself as someone who is a reliable worker". A sample neuroticism item was "I see myself as someone who can be moody". A sample openness item was "I see myself as someone who has an active imagination". All Cronbach's alphas for the five dimensions ranged from .79 to .88. There were 8 extraversion items, 9 agreeableness items, 9 conscientiousness items, 8 neuroticism items, and 10 openness items.

2.3 Design

The current study was a multi-group, non-experimental design. The main independent variables were parenting style for mother and father with 5 levels (authoritative, authoritarian, permissive, uninvolved, or not applicable) as well as birth order of the participant with 3 levels (youngest, middle, or oldest). The main dependent variables were personality scores and assessment of the sibling relationship.

2.4 Procedure

Participants signed up in advance for a time slot of 20 minutes. The online sign-up site indicated that participants must have a least one sibling, and that those with step, half, and/or adopted siblings were welcome to participate. Upon arriving at the lab at their designated time, a research assistant greeted the participants and read the informed consent form to them while they read along on their own copy. Once they agreed to participate, the signed informed consent forms were filed away. The blank informed consent was left with the participants since it contained essential information, including the contact information for the principal investigator as well as the Institutional Review Board. Participants completed a questionnaire packet which included the demographic questionnaire, LSRS, and the BFI. Once the completed packet was collected and filed separately from the informed consent, participants were orally debriefed and left the lab with a copy of the debriefing script.

3. Results

3.1 Personality

The relationship between mother's parenting style and personality was examined via a one-way Analysis of Variance (ANOVA). The independent variable of mother's parenting style had 5 levels (authoritative, authoritarian, permissive, uninvolved, or not applicable) and the dependent variable was the big five factors of personality (extraversion, agreeableness, conscientiousness, neuroticism, and openness). Mother's parenting style had no significant effect on extraversion, agreeableness, or conscientiousness. Mother's parenting style was significantly related to neuroticism, $F(4, 242) = 2.83, p = .03$. A Tukey's HSD test indicated that those with authoritarian mothers ($M = 4.06, SD = .88$) scored higher in neuroticism versus those with authoritative mothers ($M = 3.17, SD = .76$). Mother's parenting style also had a significant effect on openness, $F(4, 242) = 2.89, p = .02$. Both permissive ($M = 3.75, SD = .74$) and uninvolved parenting by mothers ($M = 4.13, SD = .76$) led to significantly higher scores on openness versus authoritative parenting by mothers ($M = 3.35, SD = .56$). Similarly, the relationship between father's parenting style and personality was examined via an ANOVA. Father's parenting style had no significant effect on any of the big five personality factors.

The relationship between parents' marital status (married, divorced, widowed, or separated) and the big five factors of personality was examined. Marital status had no significant impact on agreeableness, conscientiousness, neuroticism, or openness scores. Marital status had a significant impact on extraversion, $F(3, 243) = 2.70, p = .05$. Those with divorced parents ($M = 3.51, SD = .80$) scored significantly higher on extraversion versus those with widowed ($M = 2.88, SD = .90$) or separated ($M = 3.00, SD = .64$) parents. Total number of siblings had no impact on the big five factors. The only gender difference that emerged was related to neuroticism, $t(245) = 4.30, p < .001$. Women ($M = 3.31, SD = .73$) scored significantly higher on neuroticism than men ($M = 2.78, SD = .84$).

The relationship between birth order (youngest, middle, or oldest) and the big five factors was examined. Birth order had no significant effect on extraversion, agreeableness, or openness. Birth order did have a significant effect on conscientiousness, $F(2, 244) = 2.97, p = .05$. A Tukey's HSD test indicated that oldest children ($M = 3.82, SD = .65$) scored significantly higher in conscientiousness versus youngest children ($M = 3.61, SD = .63$). Birth order also significantly impacted neuroticism scores, $F(2, 244) = 5.30, p = .01$. A Tukey's HSD test revealed that youngest children ($M = 3.37, SD = .76$) scored significantly higher in neuroticism versus middle children ($M = 2.94, SD = .78$).

3.2 Sibling Relationships

The demographic factors of ethnicity or having stepsiblings, half siblings, or adopted siblings had no significant relation to adult sibling relationship factors. Being a twin had a significant impact on both child behavior $t(245) = 2.78, p = .01$ and child cognitions, $t(245) = 2.15, p = .03$.

Twins ($M = 4.07$, $SD = .58$) scored significantly higher in child behavior versus non-twins ($M = 3.33$, $SD = .87$). Similarly, twins ($M = 4.06$, $SD = .57$) scored significantly higher in child cognitions versus non-twins ($M = 3.45$, $SD = .92$).

As the total number of siblings increased, so did the mean for adult behavior, $r(247) = .18$, $p = .01$ and the mean for adult cognitions, $r(247) = .13$, $p = .04$. The correlation between the total number of siblings and adult affect was approaching significance, $r(247) = .12$, $p = .06$. The total number of siblings was not correlated with any of the childhood sibling measures. In terms of residential status, the only significant effect was found with child behavior, $F(2, 244) = 5.12$, $p = .01$. Those who lived at home and commuted to school ($M = 3.64$, $SD = .86$) scored significantly higher than those who lived in residence halls ($M = 3.30$, $SD = .83$) or off campus ($M = 3.10$, $SD = 1.00$). There was no significant difference between living in the residence halls and living off campus on the child behavior measure.

Birth order had no significant effect on scores for any of the six subscales in the LSRS. In terms of gender, the only difference found was related to the adult behavior subscale, $t(245) = 1.95$, $p = .05$. Women ($M = 3.48$, $SD = .97$) scored higher on this measure versus men ($M = 3.17$, $SD = .97$). The demographic of parental marital status only had an effect when it came to adult cognitions, $F(3, 243) = 3.30$, $p = .02$. Participants with married parents ($M = 4.14$, $SD = .87$) scored significantly higher versus those with divorced parents ($M = 3.73$, $SD = .80$).

ANOVAs revealed two significant findings when examining the effect of mother's parenting style on sibling relationships. Mother's parenting style significantly impacted adult cognitions, $F(4, 242) = 2.45$, $p = .05$. Those with authoritative mothers ($M = 4.08$, $SD = .84$) had higher positivity toward the adult sibling relationship in terms of beliefs versus those with permissive mothers ($M = 3.54$, $SD = 1.10$). Mother's parenting style also significantly impacted child cognitions, $F(4, 242) = 3.37$, $p = .01$. Those with authoritative mothers ($M = 3.54$, $SD = .88$) had higher positivity toward the childhood sibling relationship in terms of beliefs versus those who did not have their mothers involved in their lives ($M = 2.04$, $SD = 1.16$).

Father's parenting style impacted all six subscales of the LSRS. The impact of father's parenting style on adult affect was significant, $F(4, 242) = 4.97$, $p < .01$. A Tukey's HSD test revealed that authoritative fathers ($M = 4.33$, $SD = .60$) led to higher adult affect scores compared to authoritarian fathers ($M = 3.97$, $SD = .76$). The effect of father's parenting style on adult behavior was significant, $F(4, 242) = 3.76$, $p = .01$. A Tukey's HSD test again showed that authoritative fathers ($M = 3.58$, $SD = .90$) led to higher adult behavior scores compared to authoritarian fathers ($M = 3.02$, $SD = 1.06$). The impact of father's parenting style on adult cognitions was also significant, $F(4, 242) = 6.65$, $p < .001$. A Tukey's HSD test indicated that authoritative fathers ($M = 4.22$, $SD = .78$) led to higher adult cognitions scores versus both permissive ($M = 3.70$, $SD = .89$) and authoritarian fathers ($M = 3.60$, $SD = 1.06$).

In terms of the childhood subscales, there was a significant effect of father's parenting style on child affect, $F(4, 242) = 4.57$, $p < .01$. A Tukey's HSD test indicated that authoritative fathers ($M = 3.70$, $SD = .84$) led to higher child affect scores versus permissive fathers ($M = 3.12$, $SD = .85$). There was also a significant effect of father's parenting style on child behavior, $F(4, 242) = 3.09$, $p = .02$. A Tukey's HSD test showed that authoritative fathers ($M = 3.48$, $SD = .83$) led to higher child behavior scores versus permissive fathers ($M = 2.93$, $SD = .80$). Finally, father's parenting style significantly impacted scores on child cognitions, $F(4, 242) = 4.27$, $p < .01$. Once again, a Tukey's HSD test showed that authoritative fathers ($M = 3.64$, $SD = .84$) led to higher child cognitions scores versus permissive fathers ($M = 3.08$, $SD = .89$).

4. Discussion

The current study's purpose was to delve into an under-researched area; how parenting style (authoritative, authoritarian, permissive, uninvolved, or not applicable) might affect personality (i.e., extraversion, agreeableness, conscientiousness, neuroticism, and openness) as well as the affect, behavior, and cognitions involved in sibling relationships. This research also examined the potential link between various demographic factors and how these might impact personality and sibling relationships. These demographic factors included ethnicity, gender, parental marital status, and the current residential status of the participant.

In terms of parenting style and personality, results showed that mothers who adopted an authoritarian style had children with higher neuroticism scores versus mothers with an authoritative style. This supports the notion that an authoritative parenting style leads to better outcomes (Piko & Balázs, 2012), since neuroticism can involve many negative traits such as anxiety.

Interestingly, openness scores were higher for those with permissive and uninvolved mothers versus authoritative mothers. Father's parenting style, however, did not impact any of the big five factors of personality. Perhaps mothers are a stronger influence on the development of the main aspects of personality versus fathers.

Women were more neurotic than men, a finding that supports earlier work by Lynn and Martin (1997) which found that women scored higher on this trait across 37 different countries. However, unlike Lynn and Martin's findings of men scoring higher on extraversion versus women in 30 of the 37 countries examined, there were no other gender differences found in terms of personality traits in the current study. No differences emerged among the big five factors based on the total number of siblings a participant had. Of the big five factors, only extraversion was affected by parental marital status. Participants whose parents have divorced were more extraverted than those with widowed or separated parents. Perhaps the absence of a parent via divorce makes one more outgoing to fill the void, more so that if the parents are separated or widowed.

Much research has examined birth order and personality (e.g., Sziobiova, 2008). In terms of the current study, birth order only affected conscientiousness and neuroticism. It was found that oldest children were more conscientiousness than youngest children, and youngest children were more neurotic than middle children. The stereotype that the oldest child is the more mature and responsible one because of their position in the family could possibly explain the conscientiousness finding. However, contrary to the notion of the "middle child syndrome" it was found here that it was the youngest birth order position, not the middle, which led to higher scores on the neuroticism factor.

In terms of the sibling relationship, while factors such as ethnicity did not impact participants' views, being a twin, not surprisingly, led to higher positivity on both the child behavior and child cognitions subscales. Growing up as a twin may foster a closeness that cannot be matched in other sibling relationships. More surprisingly was the finding that birth order had no impact on any of the six subscales of the LSRS. This contradicts previous research (e.g., Rocca et al., 2010) that showed that birth order can impact siblingships. Additionally, those with married parents believed there was more positivity in the adult sibling relationships versus those with divorced parents. It seems as though divorce impacts many aspects of life, even the cognitions one has about their siblings in adulthood.

Authoritative parenting emerged as a very positive factor for the sibling relationship. Specifically, mothers who were authoritative were related to higher levels of positive adult sibling beliefs versus permissive mothers, and authoritative mothers also led to this higher positivity for childhood sibling beliefs versus those who did not grow up with their mother in their lives. Authoritative fathers impacted all six measures of the sibling relationship. First, authoritative fathers led to higher adult affect and adult behavior scores versus authoritarian fathers. There were also more positive beliefs for the adult sibling relationship when a father was authoritative versus authoritarian and permissive. Regarding childhood, having an authoritative (versus permissive) father led to higher child affect, behavior, and cognition scores.

Beyond the strengths of this study such as a respectable sample size, it should also be noted that it added to the dearth of literature on how parenting styles can affect sibling relationships, especially in adulthood. Most of the previous literature on parenting styles has focused on outcomes for children (e.g., Carlo, White, Streit, Knight, & Zeiders, 2018), but this study focused on an adult sample. Questions for future research remain, such as why birth order had very little effect on the main dependent variables. Perhaps birth order is no longer a main factor that determines a person's outcomes; in this case their sibling relationships. Future research would benefit from including both siblings in a sibling dyad. Further research should also continue to examine the effects of parenting style on a range of outcomes, including all types of relationships, from siblings to friends. One notion that is clear from the current study is that authoritative parenting remains the overall goal, and that when it comes to sibling relationships, fathers matter.

5. References

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