

Sibling Relationships, Birth Order, and Personality among Emerging Adults

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Abstract

The purpose of this study was to examine the effect of birth order on self-perceptions of various personality traits as well as the effects of both sex and birth order on perceptions of the sibling relationship during emerging adulthood. The researchers recruited 296 college students between the ages of 18 and 25 (64 men and 232 women). A variety of ethnic backgrounds and birth orders were represented. Participants completed demographic information as well as questionnaires designed to assess their perceptions of the sibling relationship (e.g., how much rivalry and closeness currently exists) as well as their self-perceptions of several personality traits (e.g., competitiveness, creativity). Results indicated no significant effects of birth order on self-perceptions of personality traits, however, numerous sex and birth order effects were found in participants' assessments of their sibling relationships. Future research directions on the topic of sibling relationships during the developmental stage of emerging adulthood will be discussed.

Keywords: sibling relationships, birth order, emerging adulthood

1. Introduction

Parents constantly monitor their children's friends throughout childhood in hopes of preventing them from falling in with the wrong crowd and being negatively influenced. But what if the biggest influence of all is living right under their nose? It is often said that people can choose their friends but they cannot choose their family. Siblings influence each other in many ways that people are often not aware of throughout the lifespan. Sibling relationships have the potential to influence all aspects of life and have been recognized as one of the longest lasting relationships in a person's life (Fortuna, Roisman, Haydon, Groh, & Holland, 2011; Goetting, 1986; Mikkelsen, Floyd, & Pauley, 2011; Portner & Riggs, 2016; Trent & Spitze, 2011). A person spends most of their time during childhood with their siblings because they often live in the same house. The relationship then continues throughout adulthood, until death. The importance of sibling relationships can be seen not only by studying human interactions, but also by studying primate sibling relationships (Suomi, 1982). By analyzing characteristics of sibling relationships in primates, researchers can distinguish what aspects of these relationships are innate and which aspects are socially constructed by humans. Many similarities were observed between how primate siblings interact with each other and how human siblings interact. Monkeys that were studied tended to play with their siblings significantly more than peers and parents. Playful interactions also decreased once monkeys reached adolescence. The last finding of this study is that monkeys with one or more siblings became independent of their mothers sooner than monkeys without siblings. These findings are important because it suggests that many effects of sibling relationships are innate. Studying sibling relationships is also important because they have significant effects on mental health. There is a negative correlation between relationship quality and depression as well as feelings of loneliness (Milevsky, 2005). The more positive the relationship is, the less likely a sibling is to suffer from depression or feel lonely.

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Having a positive relationship with a sibling can also increase self-esteem and overall life satisfaction. A positive relationship between siblings is characterized by frequent communication, compromise, and sacrifice (Michael, 1982). These feelings of loyalty all contribute to better mental health. A study by Milevsky (2005) found that feelings of support from siblings had the ability to compensate for a lack of support from parents and friends. The negative effects usually associated with no parental support were mitigated by positive sibling relationships. In addition to improving mental health, positive sibling relationships also have a positive effect on physical health attitudes (Senguttuvan, Whiteman, & Jensen, 2014). Additionally, aspects of negative relationships, such as conflict, can be used to predict obesity. Research can be used to identify factors such as conflict and rivalry that decrease the quality of sibling relationships (Stocker, Lanthier, & Furman, 1997). Subsequently, research can also be used to identify ways to improve sibling relationships which would in turn improve peoples' mental and physical health. The purpose of this paper is to broaden the understanding of sibling relationships and their importance during emerging adulthood (18-25 years old). Different aspects of the family structure are analyzed in their role in influencing sibling relationships in addition to discussing how those relationships affect development. This paper also discusses how sibling relationships may change during the transition into emerging adulthood. The current study adds to past literature by analyzing personality characteristics not yet studied in the context of emerging adulthood.

1.1 Family Structure

Results from studies on sibling relationships are often contradictory. There are so many variables involved in these relationships that finding one comprehensive conclusion is difficult. Sibling relationships are affected by different components of family structure such as age spacing (Newman, 1996; Stocker et al., 1997; Wong, Branje, VanderValk, Hawk, & Meeus, 2010), gender constellation (Campione-Barr & Smetana, 2010; McHale, Updegraff, & Whiteman, 2012; Riggio, 2006; Rosenberg, 1982; Stocker et al., 1997), and birth order (Pollet & Nettle, 2009; Rosenberg, 1982; Sulloway, 1995; Wong et al., 2010). Each of these variables affects sibling relationships in different ways.

1.1.1 Family size

In sibling relationship research, researchers often want to answer the question, is bigger better? Some studies have indicated that more siblings lead to more competition (Stocker et al., 1997). However, most research says yes, bigger is better; the larger the family, the more positive relationships are between siblings and other family members such as parents (Lawson & Brossart, 2004; Newman, 1996; Riggio, 2006).

1.1.2 Birth order

The effects of birth order on sibling relationship quality have also been a frequent topic of interest since Alfred Adler introduced his birth order theory. Since Adler, many other studies have examined how birth order may influence individuals' personality traits (Rosenberg, 1982). In a longitudinal study of 67 people, data indicated that older born children are higher achieving than their younger siblings. Other personality characteristics that are influenced by birth order are sociability, dominance, and assertiveness. Birth order has also been found to influence identity formation in emerging adults (Wong et al., 2010). As people enter into adulthood, they must decide what they want their role in life to be, and how they intend to fulfil that role. Younger siblings either conform to the same roles their older siblings chose, or choose a different path. The identity taken on by the eldest child in a family heavily influences the rest of the siblings. Many children look up to their older siblings as role models and follow in their footsteps. When younger siblings choose to pursue a different role, it is called differentiation (McHale et al., 2012). Differentiation is a tactic most often used to decrease competition and comparison between siblings.

Overall quality of sibling relationships can also be influenced by birth order. In a study that aimed to describe the relationship between birth order and perceived relationship quality, participants, ages 18-79 years old, were interviewed and asked about their views on their siblings (Pollet & Nettle, 2009). The study found that first-borns rated their relationships as more positive and prioritized family more than later-born siblings. The youngest siblings described their relationships as being the worst compared to first and middle born children. Evolutionary theory offers a possible explanation to these findings. Throughout history, parents would value the first-born child more than later-borns because the oldest child had the most reproductive value and the highest chance of survival due to high infant mortality rates (Sulloway, 1995). This unequal treatment caused resentment in younger siblings and resulted in rivalry between siblings for parents' attention and respect.

This power imbalance still remains today, just in different forms. First-born siblings often get later curfews, are able to drive first, and are given more freedoms than younger siblings, which is a main source of jealousy for later-born siblings.

1.1.3 Age spacing

Another family structure characteristic that influences sibling relationships is the age gap in between siblings. Studies regarding age spacing have found conflicting results; some research indicates that siblings close in age have better relationships (Newman, 1996), while others have found that siblings farther apart in age have better relationships and less conflict (Stocker et al., 1997). One issue researchers have run into is that there are no standards that define what differentiates a 'large' age gap from a 'small' age gap. An age difference of three years could be a small gap in one study, but be a large age gap in another. In addition to researching age spacing and its effect on relationship quality, a study by Hoffman and Teyber (1979) looked at how age spacing influences an individual's locus of control. This study found that both siblings in a male dyad believed they had control over their actions (internal locus of control), whereas those with a small age gap attributed life outcomes to external forces (external locus of control). For female dyads, siblings had internal loci of control regardless of age spacing.

1.1.4 Gender constellation

Another variable that influences the quality of sibling relationships is gender constellation. This refers to whether siblings are the same sex or different sexes. Siblings that are the same sex have more communication and trust with each other than siblings of the opposite sex (Campion-Barr & Smetana, 2010). However, there is less conflict between siblings of opposite sex (Stocker et al., 1997). The composition of siblings' genders also influences personality traits. One study found that males in opposite sex sibling dyads were low in dominance (Rosenberg, 1982). The study also found that females in opposite sex dyads were high in sociability. One reason sibling relationships are difficult to study is because of all the factors that must be taken into consideration. Family size, birth order, age spacing, and gender constellation all interact with each other in a sibling relationship. All aspects must be analyzed together in order to recognize how they impact the relationship. It is important to have a comprehensive understanding of what factors influence sibling relationships before analyzing how that relationship influences an individual's development. This knowledge is necessary in order to fully grasp the background of how the relationships became the way they are. Now that the effects of family structure have been discussed, how sibling relationships influence individuals' development must also be considered.

1.2 Effect on Development

As previously stated, sibling relationships are one of the longest relationships a person has during a lifetime, which allows a person's siblings to be influential in many aspects of life (e.g., Goetting, 1986). This influence is especially pertinent throughout childhood. During the early years of life, children spend a lot of time observing their surroundings to base future behaviors on. Siblings are often used as behavioral models and for practice with social interactions (Brody, 1998). Because of siblings, children learn to solve problems by listening to each other and compromising. Other areas of social development that are improved due to siblings are empathy and sharing (Goetting, 1986; McHale et al., 2012). These abilities siblings use to problem solve with each other transfer to issues they have with peers in the future. One study found that the more positive the relationship quality was between siblings, the higher their communication skills were (Wu Shortt & Gottman, 1997). Positive relationship skills that were exhibited during the experiment were affection and empathy. When siblings had negative relationships with each other, they showed more belligerence in their communication. Social development is not the only aspect influenced by siblings. Cognitive development is also improved by having siblings (Brody, 1998). Review of previous literature reveals that children often engage in role play. During this role play, one sibling, often the eldest, takes on the persona of teacher while the others become students. The students' cognitive abilities are increased because they are learning new information. The teacher's cognitive ability is increased because they are reviewing information and must have a thorough understanding of it in order to instruct others. During emerging adulthood, relationship competence begins to be affected by sibling relationships (Doughty, Lam, Stanik, & McHale, 2015). Romantic competence includes the belief that one's self can be a good romantic partner in addition to the ability to create and maintain romantic relationships.

When sibling relationships during childhood were characterized by conflict, the siblings involved had lower romantic competence than when the relationship was characterized by intimacy between siblings. The gender constellation of siblings also affects romantic competence; siblings in opposite sex dyads have a low sense of competence at the beginning of emerging adulthood, but become confident in their abilities to maintain romantic relationships towards the end of emerging adulthood. Siblings from same sex dyads exhibit confidence in their abilities in romantic relationships throughout all of emerging adulthood. While the study by Doughty et al. (2015) described an aspect of sibling relationships that evolves during emerging adulthood, the majority of past research focused on the influence of sibling relationships during childhood and adolescence. However, as time goes on, people change and so do their relationships. Sibling relationships are no exception. People experience many changes during emerging adulthood that influence their relationships with their siblings.

1.3 Transition into Emerging Adulthood

Emerging adulthood is considered to be the time in a person's life between the ages of 18 and 25 years old (Van Volkom, Machiz, & Reich, 2011). During this time, people are commonly dealing with monumental changes and transitions in their lives. Conger and Little (2010) have identified five life events that occur during emerging adulthood that stimulate changes in sibling relationships: moving out of the childhood home, receiving higher education, becoming employed, marriage, and childbirth. All of these events have unique influences on sibling relationship quality. Many studies have found that sibling relationships improved after a sibling moved out of the house (e.g., Goetting, 1986; Lindell, Campione-Barr, & Greer, 2013). One study interviewed younger siblings after their older sibling had moved out (Milevsky & Heerwagen, 2013). Younger siblings described a heightened appreciation for time spent with siblings after the older sibling moved away. The sense of rivalry felt by the younger siblings was also reduced when the older sibling moved out. Moving on to receive higher education often coincides with moving out of a childhood home, which improves relationship quality.

Becoming employed changes relationship quality as well because it requires a large time commitment. Emerging adults admitted to spending less time with siblings during emerging adulthood than during childhood and adolescence (Scharf, Shulman, & Avigad-Spitz, 2005). This improves the quality of sibling relationships because it decreases the likelihood of conflict occurring. When emerging adults were asked when they felt the most conflict and rivalry existed in their sibling relationships, a majority said during childhood or adolescence (Van Volkom et al., 2011). Marriage and childbirth affect sibling relationships because they signify a person becoming independent of their biological family and beginning a family of their own (Conger & Little, 2010). Overall the quality of sibling relationships improves as time goes on. The transition to emerging adulthood marks the beginning of this improvement in the relationship which is why studying sibling relationships during this time in a person's life is important.

1.4 The Current Study

Previous research in this area has focused on what influences sibling relationships during childhood and adolescence along with how those relationships influence development later in life. Researchers have given a lot of attention to how family structure characteristics such as birth order, age spacing, family size, and gender constellation affect development of social skills, cognition, and personality. Limited research however, has been conducted on sibling relationships during the transition into emerging adulthood. This is a time marked by many life changes that could influence the quality of sibling relationships and yet these influences have received minimal attention. The little research that has been conducted focused on how the quality of sibling relationships changed during the transition into emerging adulthood but failed to look at how those changes affect the siblings themselves. The aim of the current study is to build on and update previous research by investigating how birth order influences a variety of personality characteristics that participants believe themselves to possess. This study also analyzes perceptions of the sibling relationship during emerging adulthood. These perceptions include rivalry, closeness, and various means of communication between siblings.

2. Method

2.1 Participants

The present study consisted of a total of 296 participants, derived from a convenience sample at a private Northeastern University. Of these participants, 64 were male and 232 were female. The participants ranged in age from 18 to 25 ($M = 19.38$, $SD = 1.20$).

Participants varied in ethnicities with 32 being Multi-Ethnic, 179 European American, 18 African American, 14 Asian American, 24 Hispanic American, and 29 identifying as other. Participants were asked to disclose their parental marital status. Two individuals did not respond to this question, while 210 participants reported their parents as married, 57 as divorced, 10 as widowed, 14 as separated, 2 as never married, and 1 as single. Participants were also asked to indicate their birth order and total number of siblings. Of the 296 participants, 122 reported they were the youngest, 57 middle, and 117 oldest. Total number of siblings ranged from 1 sibling to 32 siblings ($M = 1.95$, $SD = 2.10$). Participants were asked to indicate their residential status while at school and 73 reported they live at home and commute to school, while 175 lived in residence halls, and 48 lived in off-campus housing. Participants were asked a series of questions about the type of siblings they have including whether they have any identical or fraternal twins, stepsiblings, half siblings, or adopted siblings. Twenty-two participants reported they had an identical or fraternal twin, while 273 reported no twin, and 1 failed to report. For stepsiblings, 27 reported they had a stepsibling and 269 reported they did not have a stepsibling. For half siblings, 48 reported they had half siblings, and 248 reported no half siblings. Finally, 6 participants reported they had an adopted sibling, while 290 reported they did not have any adopted siblings.

2.2 Materials

The materials that were used in this study included a demographics questionnaire and a sibling relationship and personality traits questionnaire.

2.2.1 Demographics

The demographics survey contained general questions asking about the participants' age, sex, and ethnic background. It also asked questions about parental marital status, birth order, total number of siblings, and college residential status. Finally, it asked questions about whether the participant had an identical or fraternal twin, step-sibling, adopted sibling, or half-sibling.

2.2.2 Sibling relationship and personality traits questionnaire

The sibling relationship and personality traits questionnaire was a survey constructed by the researchers for the purpose of the current study. It contained 16 items with questions asking about the participants' sibling relationship and communication with their sibling. The items included questions such as "How much rivalry currently exists in your relationship?" and "How often do you speak with your siblings on the phone?". The personality traits part of the questionnaire asked questions such as "In general, I feel I am competitive," and "In general, I feel that I am family-oriented." All personality trait questions were on a 7-point Likert scale (1 = *not at all*; 7 = *very much so*). The Cronbach's alpha for this measure was .79.

2.3 Design

The present study was a multi-group, between-subjects design. There were three levels to the main independent variable of birth order. The levels were youngest, middle, and oldest. The dependent variables included how emotionally close the participant was to their siblings and how often they communicate with their siblings.

2.4 Procedure

Participants used an online portal to sign up for this study. Upon arrival to the study, each participant was given two copies of an informed consent. They were informed to sign one copy and to retain one for their records. Once the participant agreed to participate and handed in a signed copy, it was placed in a separate file to maintain confidentiality. Participants were then given the survey which consisted of the demographics questionnaire and the sibling relationship and personality traits questionnaire. Once they completed the survey, they were debriefed, given an opportunity to ask any questions, and were thanked for their time. In exchange for their participation, participants were awarded with research credit for their psychology classes.

3. Results

A one-way analysis of variance examining the three birth orders (youngest, middle, and oldest) revealed no significant differences among the groups in self-perceptions of the following traits: family-oriented, achievement-oriented, creative, self-confident, intelligent, outgoing, rebellious, empathetic, and competitive.

Differences in the self-perception of one's aggressiveness were trending toward significance, $F(2, 293) = 2.42, p = .09$. Middle children ($M = 3.81, SD = 1.90$) perceived themselves to be more aggressive than oldest children ($M = 3.22, SD = 1.61$). A series of two-way ANOVA's were run with birth order and sex as the independent variables and various perceptions of the sibling relationship as the dependent variables. There were no differences found between the sexes or the birth orders for the amount of rivalry currently in the sibling relationship, wanting to be friends with siblings if they were not related, and how often participants Skype with, text, e-mail, or call their siblings. A main effect for interactions with siblings via Facebook was trending toward significance, $F(2, 290) = 2.49, p = .09$, with youngest siblings ($M = 3.43, SD = 2.24$) reporting the highest likelihood to communicate with siblings via Facebook, followed by middle ($M = 3.23, SD = 1.88$), then oldest siblings ($M = 2.47, SD = 1.99$). There were also no sex or birth order differences when participants were asked if they maintain their relationship with their sibling only due to family obligation. A 2 (male versus female) X 3 (youngest versus middle versus oldest children) ANOVA revealed significant main effects for both sex ($F(1, 290) = 5.47, p = .02$) and birth order ($F(2, 290) = 5.02, p = .01$) when examining participants' interactions with their siblings via FaceTime. Women ($M = 3.82, SD = 2.11$) reported interacting with their siblings via FaceTime more than men ($M = 2.98, SD = 2.05$). In addition, a post hoc Tukey's test revealed that middle children ($M = 4.11, SD = 1.91$), reported more interactions with siblings via FaceTime than youngest children ($M = 3.23, SD = 2.13$). Oldest children did not differ significantly from the other two birth orders in terms of how often they communicate with siblings via FaceTime.

Although there was no significant sex difference in how emotionally close participants felt to their siblings, there was a significant main effect of birth order on perceptions of emotional closeness, $F(2, 290) = 4.40, p = .01$. A post hoc Tukey's test revealed that oldest children ($M = 5.55, SD = 1.41$) felt closer emotionally to their siblings versus youngest children ($M = 5.02, SD = 1.58$). Middle children did not differ significantly from the other two birth orders in their perceptions of emotional closeness to their siblings. When asked if they would turn to their siblings in a time of need, there was no significant main effect of birth order, but there was a significant sex difference, $F(1, 290) = 6.31, p = .01$. The women ($M = 4.86, SD = 1.84$) in the sample were more likely to turn to their siblings during a difficult time than the men ($M = 4.13, SD = 2.04$). Participants were asked to predict how close they think they would be to their siblings in both middle and older adulthood. Analyses showed no main effect of sex in terms of closeness in middle adulthood, but there was a significant main effect of birth order in middle adulthood predictions, $F(2, 290) = 6.02, p = .003$. A post hoc Tukey's test revealed that oldest children ($M = 6.15, SD = .83$) felt they would be closer to their siblings in middle adulthood versus youngest children ($M = 5.63, SD = 1.51$). Middle children did not differ significantly from the other two birth orders in their predictions of closeness to their siblings at mid-life. A slightly different pattern of results emerged for predictions of closeness in older adulthood. While there was no significant main effect of sex, there was again a main effect of birth order, $F(2, 290) = 4.39, p = .01$. Oldest children ($M = 6.28, SD = .87$) felt they would be closer to their siblings in older adulthood versus both youngest children ($M = 5.68, SD = 1.52$) and middle children ($M = 5.72, SD = 1.11$). Middle and youngest children did not differ significantly from each other in their predictions of closeness to their siblings during late-life.

Outside of family get-togethers such as holidays, ANOVA's revealed no sex differences in time spent with siblings, but there was a significant main effect of birth order, $F(2, 290) = 5.31, p = .01$. A post hoc Tukey's test showed that oldest children ($M = 5.27, SD = 1.64$) reported spending more time with their siblings versus youngest children ($M = 4.67, SD = 1.85$). Middle children did not differ significantly from the other two birth orders in their reports of time spent with siblings outside of family holiday gatherings. Although there was no main effect of birth order, there was a significant main effect of sex on time spent thinking about one's siblings, $F(1, 290) = 6.24, p = .01$. Women ($M = 5.19, SD = 1.35$) spent more time thinking about their siblings than men ($M = 4.61, SD = 1.54$). Similarly, there was no main effect of birth order on the value placed on the sibling relationship, but there was a significant main effect of sex on how much the sibling relationship is valued, $F(1, 290) = 4.16, p = .04$. Women ($M = 6.45, SD = 1.00$) valued their relationship with their siblings more than men ($M = 6.03, SD = 1.38$).

4. Discussion

The present study was designed to expand upon existing research in the area of birth order and sibling relationships during a specific developmental period: emerging adulthood. Although the findings that middle children rated themselves higher on the trait of aggressiveness than oldest children was approaching significance. This study yielded were no statistically significant differences among the three birth orders in self-perceptions of various personality traits, ranging from creativity to empathy.

This contradicts earlier research showing differences among the birth orders in their personal characteristics (e.g., Rosenberg, 1982). Reasons for the current findings are numerous, including the possibility that birth order may not be as strong of an influence as it was in the past on personality, age spacing could mediate the effect of birth order on personality, and there are many other aspects of one's life that can influence the development of various personality traits. In addition, participants in the current study were asked to self-report select personality traits, which is a limitation of the present research. This research did not find sex or birth order effects on most types of communication with siblings (e.g., Skype, e-mail, texting), but the use of FaceTime did emerge as a factor affected by both sex and birth order. Women utilized FaceTime more often with their siblings than men, and middle children utilized it more than youngest children to communicate with their siblings. Older children did not differ from middle or youngest siblings in their use of FaceTime to communicate with their siblings. Perhaps the sex difference emerged because women are socialized, more so than men, to foster relationships. This also mirrors the findings that women were more likely to think of their sibling relationships, value them, and turn to their sibling for support during difficult times than men. Siblings as a source of social support have been discussed in much previous research (e.g., Mikkelsen et al., 2011).

There were no sex or birth order effects on the amount of rivalry in the sibling relationship, but this could be due to many factors, including the fact that only about 25% of the participants lived at home, so the distance from the sibling for many of the participants may improve the relationship, similar to findings by researchers such as Lindell et al. (2013). Additionally, perhaps participants, being emerging adults, felt they left the rivalry with their siblings behind when they left childhood and adolescence. Birth order did affect feelings of emotional closeness to siblings. Specifically, older children felt closer to their siblings versus younger children, with middle children showing no difference between themselves and the other birth orders in terms of their perception of current emotional closeness. Similarly, oldest children predicted a closer relationship with siblings at mid-life versus youngest children and predicted more closeness at late-life versus both middle and youngest children. This may be due to first born children taking on many roles, such as role model and teacher (e.g., Van Volkom, 2003), and feeling it is their responsibility to maintain the sibling bond throughout adulthood.

There are numerous strengths of the current study, including a healthy sample size, ethnic diversity, and good representation across the three birth orders. A number of limitations also exist, many of which can be translated into future research. First, the lack of findings related to birth order and personality necessitate the need for further exploration. Additionally, having an interview study and/or having the participants' siblings also complete relationship perception questionnaires would offer further insight into this bond during emerging adulthood. More attention should also be paid to other issues surrounding this relationship that were not the focus here, including number of siblings and age spacing between siblings. Finally, future research should endeavor to include a non-college sample in the exploration of the sibling bond during emerging adulthood. Often seen as secondary to the parent-child relationship, the sibling bond is an important one to study during all stages of development, including emerging adulthood. During a time of transition, people need multiple sources of support, and having a sibling to feel close to and turn to for support remains an important topic of study. This study serves as one step in expanding and updating the research on the sibling bond beyond childhood, and now it remains to be seen why birth order, as well as sex, can influence so many aspects of this relationship, ranging from emotional closeness to communication.

5. References

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