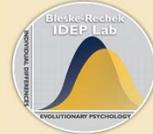




BIRTH ORDER AND PERSONALITY: A WITHIN-FAMILY TEST OF CULTURAL LORE

Jenna A. Kelley

University of Wisconsin – Eau Claire, Department of Psychology
(Faculty Mentor: April Bleske-Rechek)



INTRODUCTION

- Assumptions about the effects of birth order on personality abound in popular culture, self-help books, and the scholarly clinical literature.
- The most prominent theory of birth order¹ proposes that siblings occupy different niches to compete for parental investment, such that firstborn children follow the status quo (are more rule-bound and conscientious) and laterborn children rebel (are more unconventional).
- Although between family designs have consistently failed to find effects of birth order², a modified within-family design has documented predicted effects.^{3,4} That is, when one sibling compares him/herself to their siblings, birth order predicts who is nominated as the most conscientious and who as most open or rebellious (unconventional).
- However, directly comparing oneself to one's sibling encourages contrast effects. We employed a true within-family design that uses independent self-report data from both a firstborn and laterborn adult sibling from each family (in addition to parent reports of both siblings). In accord with Harris' theory of personality development,^{5,6} we expected that neither adult siblings' independent self-reported personality traits nor parents' reports of those siblings' personality traits would differ by birth order.

METHOD

- The original sample included 70 female and 22 male undergraduates who were recruited for a study of "similarities and differences in siblings' personalities." They participated in small group sessions, and completed the 44-item Big Five Inventory via paper and pencil questionnaires. Participants' mean age was 21.10.
- Participants provided the name and contact information of a sibling with whom they had been raised. We requested the sibling be within five years of their own age, but allowed for exceptions as necessary. Most siblings were within five years of the original participant's age; siblings' mean age was 22.23. Via email, we contacted siblings and invited them to complete an online version of the questionnaire about themselves. A total of 78 siblings (85% response rate) provided complete personality data.
- The original participants also provided the name and contact information of a close same-sex friend who could serve as a "peer informant" about the original participant. Via email, we contacted friends and asked them to complete the personality inventories, but not about themselves. Instead, they provided an evaluation of the original participant's personality. A total of 79 peers (86% response rate) responded and provided complete personality data on the original participant who had nominated them.
- We later contacted original participants and told them we were interested in their parents' perceptions of their children's personality traits and requested contact information for one or both parents. A total of 56 participants complied with the request. We mailed parents a personalized BFI about each of their two children and received data from parents of 44 different sibling pairs.

VALIDITY OF THE DATA

- Prior to testing for birth order differences in personality, we conducted analyses to establish the reliability and validity of our data on Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. First, internal reliability coefficients for self, peer, and parent reports were high. Second, as shown in the table below, self-reports and peer reports converged, as did self-and parent-reports. Moreover, siblings showed moderate similarity on three of five factors, which we expect from biological relatives.

	O	C	E	A	N
Consensus:					
Self- and peer reports (n=79)	.50***	.42**	.60***	.28*	.42**
Firstborns' self- and parent-reports (n=44)	.61***	.45**	.66***	.30*	.51**
Laterborns' self- and parent-reports (n=44)	.29*	.47**	.61***	.20	.34*
Familial Similarity:					
Siblings' self-reports (n=69)	.31**	.26*	-.10	-.01	.25*
Parent reports of firstborn and laterborn (n=44)	.24	.05	-.32*	.23	.51***

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. Internal reliability coefficients for original participants' self-reports, sibling self-reports, peer reports, and parent reports range from .77 to .83 for Openness, .77 to .84 for Conscientiousness, .87 to .89 for Extraversion, .66 to .88 for Agreeableness, and .83 to .84 for Neuroticism.

RESULTS

Figure 1. Siblings' Self-Reported Personality as a Function of Birth Order

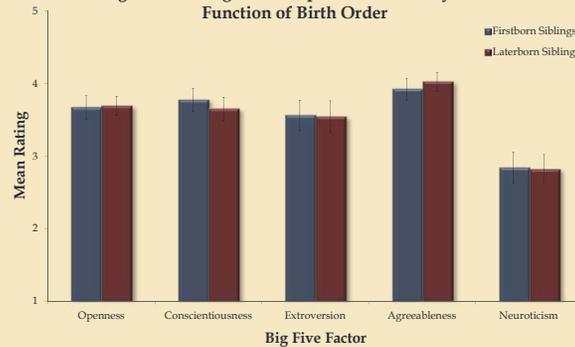


Figure 1 displays the results of within-family sibling comparisons (69 pairs). Birth order was not related to personality. Among these sibling pairs, first-borns did not perceive themselves as any more achievement oriented (Conscientious) than laterborns perceived themselves to be; likewise, laterborns did not report any higher levels of Openness or Agreeableness than firstborns did (all paired-samples t -test $ps > .05$).

Figure 2. Parents' Reports of their Adult Children's Personality as a Function of Children's Birth Order

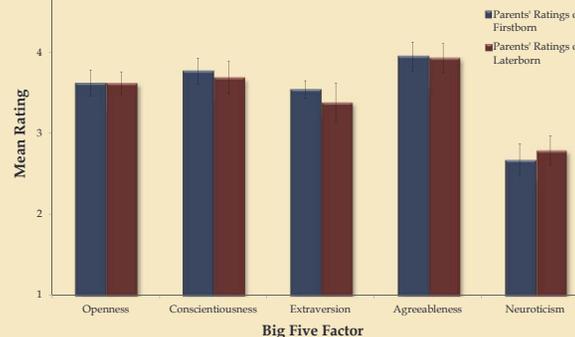


Figure 2 displays parents' ratings of their adult children's (the siblings') personality traits, by birth order. Parents' perceptions of their children varied (as shown in Table at lower left), but parents' perceptions of their children did not differ systematically as a function of birth order (all paired-samples t -test $ps > .05$).

Figure 3. Peer Reports of Original Participants' Personality as a Function of Participants' Birth Order

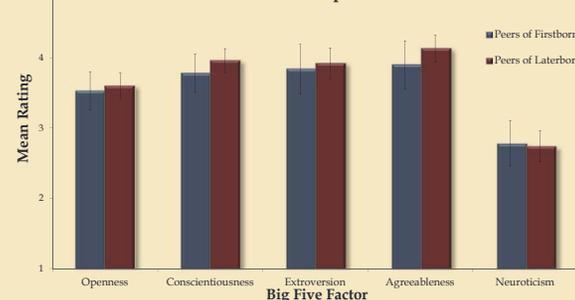


Figure 3, displaying between-family comparisons of the peer reports, provides convergent evidence of the lack of an association between birth order and personality. Friends of the 26 first-born individuals and friends of 53 later-born individuals did not differ systematically in how they perceived those individuals (all independent-samples t -test $ps > .05$).

DISCUSSION

- Notions about the influence of birth order are so prominent in popular culture that most people are not even aware of the scientific debate surrounding them. Harris^{5,6,7} argued that past research has been unable to document systematic effects because any influence of birth order is limited to the focused context of childhood home environment (and does not extend to other environments or into adult personality development). However, others⁴ have argued that within-family designs are needed to capture birth order effects, are essential. To our knowledge, we are the first team to investigate effects of birth order on personality using a complete within-family design; that is, by asking siblings of varying birth orders, from the same family, to both provide independent self-reports of their own personality. We found no effects of birth order from our sibling self-reports, nor from our parents' reports on these two siblings. We cannot attribute the lack of statistical significance in our design to small samples, because the effect sizes for our within-samples comparisons were negligible. Other researchers^{3,4} have reported moderate effect sizes, which we would have had the statistical power to detect. Moreover, firstborns and laterborns in our sample were not rated differently by their peers. This finding corroborates those of several previous between-family designs of larger scale^{8,9} that have failed to document consistent support for hypothesized birth order differences.

CONCLUSION

- Cultural lore and popular books advertise birth order as a key factor – in some cases, the key factor – to explaining why individuals turn out the way they do. The notion that birth order is significant seems to be rooted in subjective experiences or a desire to find the family environment as a source of influence on individuals' development; however, it is not supported by the weight of the evidence. We concur with Judith Rich Harris (2000): "It is time for researchers to look elsewhere – outside the childhood home – for the sources of the nongenetic variation in adult personality" (p. 177).

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