ENCYCLOPEDIA
on Early Childhood
Development

Sibling Relations and Their Impact on Children's Development

Nina Howe, PhD, Holly Recchia, PhD, Christine Kinsley, MA

Department of Education and Centre for Research in Human Development, Concordia University, Canada

March 2023, 2e éd. rév.

Introduction

The majority of children around the world have at least one sibling. The sibling relationship is likely to last longer than any other relationship in one's lifetime and plays an integral part in the lives of families. Yet, in comparison to the wealth of studies on parent-child and peer relationships, relatively little attention has been devoted to the role of siblings and their impact on one another's development. In recent decades, research on sibling relations in early childhood has shifted from examining the role of structural variables (e.g., age, birth order) towards more process variables (e.g., positive and negative exchanges). Siblings are viewed as an integral component of family systems[1,2] and as an important context for children's learning and development3 but there are a number of methodological and conceptual challenges to studying siblings from this perspective.

Subject

©2023-2026 ABILIO | PEER RELATIONS

In early childhood, four major characteristics of sibling relations are prominent.[1,2] First, sibling relationships are emotionally charged, and defined by strong, uninhibited emotions of a positive, negative and sometimes ambivalent quality.[1,2,4-6] Second, sibling relations are often characterized by intimacy: as youngsters spend large amounts of time together, they know each other very well. This long history and intimate knowledge translates into opportunities for providing emotional and instrumental support for one another,[5] for engaging in pretend play,[7-11] humor,[12-15] for conflict,[6,16-21] and for understanding others' points of view and their thoughts and feelings.[22-26] Third, sibships are characterized by large individual differences in the quality of children's relations with one another.[1,2,4,5] Fourth, the age difference between siblings often makes issues of power and control[27-32] as well as rivalry and jealousy[33-35] sources of contention for children, but also provide a context for more positive types of complementary exchanges, such as teaching,[36-40] helping,[1,2,5,40,41] caregiving interactions,[5,42,43] and prosocial behaviour.[41,44-46] Broadly speaking, the characteristics of sibling relations sometimes make them challenging for parents, because of the potentially emotional and highly charged nature of the relationship. One issue that arises due to age differences is differential parental treatment from the siblings' perspective.[6,47-49]

Problems

There are a number of methodological issues in the sibling literature. Birth order and age differences are confounded in many studies; thus, it is challenging to distinguish between role (i.e., birth order) and developmental differences.[2,20] Recruiting families with young children and collecting data at home can be time-consuming, yet provides rich naturalistic data. To date, research has focused on sibling dyads within middle-class, two-parent, predominantly White families in the US, Canada, and Western Europe. We therefore we know less about families with more than two children, single-parent families,[3,50] from different socioeconomic groups,[3] or families in varied cultures, although there have been some studies of Mayan[46,51,52] and Mexican-American families.[53-55] In more recent years, there are some studies investigating siblings in varied cultural contexts, such as Chinese,[56-58] Greek,[59] and Turkish, Dutch, and Indian families.[60,61]

Research Context

There are a number of longitudinal studies that have followed siblings and families from the birth of a second child[62] and over early childhood and beyond.[26,33,48,63-72] While there is wide variation in how children respond to the birth of a younger sibling, most children are positive and eager to help care for the baby and exhibit little or no disruptive behaviour.[62] By early childhood siblings'

positive, friendly interactions often outweigh their negative interactions.[73] Most studies of siblings in early childhood have employed naturalistic observations of siblings interacting at home, usually with their mothers, although some studies have also included fathers.[21,33,56,71,72,74,75] Observational data is complemented by sibling and parent interviews, questionnaires, hypothetical scenarios, structured tasks such as conflict negotiations, teaching tasks, or play sessions and measures of children's cognitive, emotional and social development.

Key Research Questions

A basic question that has driven the research on sibling relations is why some dyads appear to get along so well and act as sources of emotional and instrumental support and companionship for one another, whereas other siblings have a much more troubled and conflictual relationship.[1,2,17,61,76] Following from this, a number of key questions have been raised:

1. How are the quality and nature of sibling relations associated with social-emotional outcomes, children's adjustment, children's later interactions in other relationships, and their understanding of their social worlds?
2. How should parents intervene in their children's conflicts?
3. What are the connections between differential parental treatment (i.e., when one child is given preferential treatment) and sibling relationships?
4. What are the roles of age, birth order and gender in defining the nature and quality of sibling relations?
5. How does the quality of earlier sibling relations affect sibling interactions over time?

Recent Research Findings

Sibling relations provide an important context for the development of children's understanding of their social, emotional, moral and cognitive worlds.[1,2,26,77] In particular, siblings play a key role in the development of children's understanding of others' minds, namely their understanding of emotions, thoughts, intentions, and beliefs.[1,2,24,77] Siblings seem to demonstrate an understanding of others' minds and emotions during real-life interactions long before they show this understanding on more formal assessments.[1,42,78] In particular, this understanding is revealed during episodes of imitation, teasing, shared humour, pretend play, conflict resolution, teaching, prosocial behaviour, and through their use of connected communications and emotional and

mental language during conversations.[1,2,10-15,23,42,45,79-81] Conflict can be an opportunity for siblings to learn constructive resolution skills culminating in a mutually agreeable (win-win) solution for both children, emotional regulation and understanding, and for considering the opponent's perspective.[42] Young siblings who engage in frequent pretend play demonstrate a greater understanding of others' emotions and thoughts, show evidence of creativity in their play themes and object use, and are more likely to construct shared meanings in play.[7,9-11,82,83] Individual differences in pretend play and conflict management strategies predict children's social understanding over time,[14,23,42,63,84] conflict resolution skills at age six,[85] and adjustment to first grade.[86]

One important area of research is related to sibling conflict and the best ways for parents to intervene when children disagree. Sibling conflicts are frequent,[21,87] often poorly resolved,[6,88,89] and sometimes highly aggressive, violent, or even abusive.[17,61,90] When parents employ harsh, punitive discipline this is associated with greater sibling conflict and less friendly interaction even before the younger child is age 1.[62,73] Coercive and frequent sibling conflict and bullying in childhood are also associated with poorer adjustment both concurrently[16,91] and later in life.[75,92] High levels of conflict may be particularly problematic when they are accompanied by an absence of sibling warmth.[61,76,93] Given these findings, it is not surprising that sibling conflict is a source of worry for parents5 and that they are concerned about the best way to intervene.[33,94] Although most parents intervene by adjudicating,[95] some interventions have trained parents to mediate their children's sibling conflicts.[6,96-100] By structuring the negotiation process and yet leaving the final resolution in the hands of the children themselves, these interventions suggest a promising way to improve conflict outcomes while simultaneously helping children to understand one another and to develop more constructive resolution strategies.

When parents treat their children differently by directly varying amounts of positive affect, responsiveness, control, discipline and intrusiveness to the two children, sibling relations are likely to be more conflictual and less friendly,[47,49,72,101] but only if children view the differences as unfair.[102-105] More broadly speaking, sibling jealousy in the preschool years is linked to lower quality sibling relationships later in childhood.[33,106]

First-born siblings engage in leadership, teaching, caregiving, and helping roles, whereas second-born siblings are more likely to imitate, follow, take on the role of learner, and elicit care and help.[2,6,38,40,45,90,107] Younger siblings often imitate the older child's language and actions during play, which is one way to establish shared meanings.[80,108] Siblings demonstrate the ability to teach

one another during semi-structured tasks and also during ongoing interactions while playing together at home,[38,39,55,109-112] while taking into account their sibling's knowledge and understanding.[36,43] During early childhood, siblings can act as sources of support during caretaking situations when parents are absent for a short time[5,43] and in middle childhood siblings may provide support during stressful family experiences.[43,66,113] The natural power differences that result from the age difference between siblings mean that two children are likely to have different experiences in the family. For instance, second-born children have the benefit of learning from an older sibling, sometimes leading to precocious development for second-borns in certain areas.[114]

Older sisters are more likely to engage in caretaking and helping roles than older brothers,[41,43] whereas boys are reported to be more aggressive with siblings than girls according to parent reports.[17] Nevertheless, there are few consistent gender or age gap differences in sibling relations in early childhood. As second-born siblings become more cognitively, linguistically, and socially competent over the early years, they begin to take on more active roles in sibling interactions, for example by initiating more games or teaching their sibling.[6,38,64] As such, the early power imbalance that exists between siblings seems to become less prominent as siblings age, and interactions become more equitable.[2,6,29,34,50,78]

There is continuity in the quality of sibling relations during the early years and from early to middle childhood to early adolescence, particularly for older siblings' positive behaviour and feelings towards the younger.[53,67,68,80,115,116] However, large individual differences in the quality of sibling relations have been documented in many studies cited here, which may also be influenced by other factors such as children's temperamental profiles,[1,6,62] number of siblings,[69] children's social understanding,[2,24,69] and parenting styles.[62,73,101]

Conclusions

The sibling relationship is a natural laboratory for young children to learn about their world.[2,3] It provides opportunities to learn how to interact with others who are interesting and engaging playmates, to learn how to manage disagreements, and to learn how to regulate both positive and negative emotions in socially acceptable ways.[5,26,42] In this way, it provides a venue for young children to develop an understanding of social relations with family members who may be close and loving at times and at other times, be unkind, exhibit jealousy, or act aggressively.[33,75,92] Further, there are many opportunities for siblings to use their cognitive skills to convince others

of their point of view, teach, or imitate the actions of their sibling. The positive benefits of establishing warm and positive sibling relationships may last a lifetime, whereas more difficult early relationships may be associated with problematic developmental outcomes.[17,56,61,76] The task for young siblings (with support from their parents) is to find the balance between the positive and negative aspects of their interactions as both children develop over time.

Implications for Policy and Service Perspectives

Sensitive parenting requires that adults employ developmentally appropriate strategies with children of different ages. Parental strategies for managing sibling conflicts, particularly the promotion of constructive (e.g., negotiated and fair resolutions, prosocial behaviours) versus destructive (e.g., use of coercion and aggression) strategies, is vitally important for learning how to get along with others.[6,94,98,117] The service and policy implications indicate that some parents may need help with these issues and there is a need for the development of parent education and sibling intervention programs.[6,42,94] Certainly we know from research that interventions to train parents to mediate sibling quarrels can be successful,[6,98,99] but reducing conflict has not generally been associated with an increase in prosocial sibling interactions.[76] Various intervention programs have been developed.[5,6,96,100,118] Some programs have been aimed at assisting parents to develop better guidance strategies, but have not directly targeted siblings themselves. However, one promising social skills intervention program aimed at increasing prosocial interactions between young children was successful in improving sibling relationship quality and emotion regulation skills.[119-121] This program has also resulted in improvements in parental emotional regulation.[122] Clearly, however, further development of intervention programs aimed at improving sibling relationships is an area for future work from both a services and policy perspective.[6,96]

References

1. Dunn J. Sibling relationships. In: Smith PK, Hart CH, eds. *Blackwell Handbook of Childhood Social Development*. Blackwell Publishing; 2002:223-237.

2. Howe N, Paine AL, Recchia H, Ross H. Sibling relations in early childhood. In: Hart C, Smith PK, eds. *Wiley-Blackwell Handbook of Childhood Social Development, 3rd Edition.* Wiley; 2022:443-458.

3. Howe N, Recchia H. Sibling relationships as a context for learning and development. *Early Education and Development*. 2014;25(2):155-159. doi:10.1080/10409289.2014.857562

4. Dunn J. Siblings. In: Grusec J, Hastings P, eds. *Handbook of Socialization: Theory and Research. 2nd ed*. Guilford; 2015:182-201.

5. Kramer L, Conger KJ, Rogers CR, Ravindran N. Siblings. In: Fiese BH, Celano M, Deater-Deckard K, Jouriles EN, Whisman MA, eds. *APA Handbook of Contemporary Family Psychology: Foundations, Methods, and Contemporary Issues across the Lifespan. Vol. 1.* American Psychological Association; 2019:521-538. doi:10.1037/0000099-029

6. Volling BL, Howe H, Kramer L. The development of sibling relationships across childhood and adolescence: Recommendations for parents and practitioners. In: Bornstein MH, Shah PE, eds. *Handbook of Pediatric Psychology*. American Psychological Association. In press.

7. Howe N, Petrakos H, Rinaldi CM, LeFebvre R. "This is a bad dog, you know…": Constructing shared meanings during sibling pretend play. *Child Development*. 2005;76(4):783-794. doi:10.1111/j.1467-8624.2005.00877.x

8. Howe N, Abuhatoum S, Chang-Kredl S. "Everything's upside down. We'll call it upside down valley!": Siblings' creative play themes, object use, and language during pretend play. *Early Education and Development*. 2014;25(3):381-398. doi:10.1080/10409289.2013.773254

9. Leach J, Howe N, Dehart G. 'An earthquake shocked up the land!' Children's communication during play with siblings and friends. *Social Development*. 2015;24(1):95-112. doi:10.1111/sode.12086

10. Leach J, Howe N, DeHart G. Children's connectedness and shared meanings strategies during play with siblings and friends. *Infant and Child Development*. 2022;31(6):e2365. doi:10.1002/icd.2365

11. Leach J, Howe N, DeHart G. Children's connectedness with siblings and friends from early to middle childhood during play. *Early Education and Development*. 2022;33(8):1289-1303.

©2023-2026 ABILIO | PEER RELATIONS

doi:10.1080/10409289.2021.1968733

12. Paine AL, Howe N, Karajian G, Hay DF, DeHart G. 'H, I, J, K, L, M, N, O, PEE! Get it? Pee!': Siblings' shared humour in childhood. *British Journal of Developmental Psychology*. 2019;37(3):336-353. doi:10.1111/bjdp.12277

13. Paine AL, Hashmi S, Howe N, Johnson N, Scott M, Hay DF. "A pirate goes nee-nor-nee-nor!" humor with siblings in middle childhood: A window to social understanding? *Developmental Psychology*. 2022;58(10):1986-1998. doi:10.1037/dev0001403

14. Paine AL, Howe N, Gilmore V, Karajian G, DeHart G. "Goosebump man. That's funny!": Humor with siblings and friends from early to middle childhood. *Journal of Applied Developmental Psychology.* 2021;77:101321. doi:10.1016/j.appdev.2021.101321

15. Paine AL, Karajian G, Hashmi S, Persram RJ, Howe N. "Where's your bum brain?" Humor, social understanding, and sibling relationship quality in early childhood. *Social Development*. 2021;30(2):592-611. doi:10.1111/sode.12488

16. Buist KL, Deković M, Prinzie P. Sibling relationship quality and psychopathology of children and adolescents: A meta-analysis. *Clinical Psychology Review.* 2013;33(1):97-106. doi:10.1016/j.cpr.2012.10.007

17. Dirks MA, Recchia HE, Estabrook R, Howe N, Petitclerc A, Burns JL, Briggs-Gowan MJ, Wakschlag LS. Differentiating typical from atypical perpetration of sibling-directed aggression during the preschool years. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*. 2019;60(3):267-276. doi:10.1111/jcpp.12939

18. Howe N, Rinaldi CM, Jennings M, Petrakos H. "No! The lambs can stay out because they got cozies": Constructive and destructive sibling conflict, pretend play, and social understanding. *Child Development.* 2002;73(5):1460-1473. doi:10.1111/1467-8624.00483

19. Perlman M, Garfinkel DA, Turrell SL. Parent and sibling influences on the quality of children's conflict behaviours across the preschool period. *Social Development.* 2007;16(4):619-641. doi:10.1111/j.1467-9507.2007.00402.x

20. Recchia HE, Howe N. When do siblings compromise? Associations with children's descriptions of conflict issues, culpability, and emotions: When do siblings compromise? *Social Development*. 2009;19(4):838-857. doi:10.1111/j.1467-9507.2009.00567.x

21. Ross HS, Filyer RE, Lollis SP, Perlman M, Martin JL. Administering justice in the family. *Journal of Family Psychology*. 1994;8(3):254-273. doi:10.1037/0893-3200.8.3.254

22. Hou XH, Wang LJ, Li M, Qin QZ, Li Y, Chen BB. The roles of sibling status and sibling relationship quality on theory of mind among Chinese preschool children. *Personality and Individual Differences.* 2022;185:111273. doi:10.1016/j.paid.2021.111273

23. Leach J, Howe N, DeHart G. "I wish my people can be like the ducks": Children's references to internal states with siblings and friends from early to middle childhood: Internal state language. *Infant and Child Development.* 2017;26(5):e2015. doi:10.1002/icd.2015

24. Paine AL, Pearce H, van Goozen SHM, de Sonneville LMJ, Hay DF. Late, but not early, arriving younger siblings foster firstborns' understanding of second-order false belief. *Journal of Experimental Child Psychology*. 2018;166:251-265. doi:10.1016/j.jecp.2017.08.007

25. Recchia HE, Howe N. Family talk about internal states and children's relative appraisals of self and sibling. *Social Development.* 2008;17(4):776-794. doi:10.1111/j.1467-9507.2007.00451.x

26. Tan L, Volling BL, Gonzalez R, LaBounty J, Rosenberg L. Growth in emotion understanding across early childhood: A cohort-sequential model of firstborn children across the transition to siblinghood. *Child Development*. 2022;93(3):e299-e314. doi:10.1111/cdev.13729

27. Abuhatoum S, Della Porta S, Howe N, DeHart G. A longitudinal examination of power in sibling and friend conflict. *Social Development*. 2020;29(3):903-919. doi:10.1111/sode.12433

©2023-2026 ABILIO | PEER RELATIONS

28. Abuhatoum S, Howe N. Power in sibling conflict during early and middle childhood: Power in sibling conflict. *Social Development*. 2013;22:738-754. doi:10.1111/sode.12021

29. Campione-Barr N. The changing nature of power, control, and influence in sibling relationships. In: Campione-Barr N, ed. *Power, Control, and Influence in Sibling Relationships across Developmen. New Directions for Child and Adolescent Development.* Vol. 156. Jossey-Bass; 2017:7-14. doi:10.1002/cad.20202

30. Della Porta S, Howe N, Persram RJ. Parents' and children's power effectiveness during polyadic family conflict: Process and outcome. *Social Development*. 2019;28(1):152-167. doi:10.1111/sode.12333

31. Della Porta S, Persram RJ, Howe N, Ross HS. Young children's differential use of power during family conflict: A longitudinal study. *Social Development.* 2022;31(1):165-179. doi:10.1111/sode.12527

32. Della Porta S, Howe N. Mothers' and children's perceptions of power through personal, conventional, and prudential conflict situations. *Merrill-Palmer Quarterly*. 2012;58(4):507-529. doi:10.1353/mpq.2012.0024

33. Kolak AM, Volling BL. Sibling jealousy in early childhood: longitudinal links to sibling relationship quality. *Infant and Child Development*. 2011;20(2):213-226. doi:10.1002/icd.690

34. Volling BL, Kennedy DE, Jackey LMH. The development of sibling jealousy. In: Legerstee M, Hart S, eds. *Handbook of Jealousy: Theory, Research, and Multidisciplinary Approaches.* Blackwell Publishers; 2010:387-417.

35. Volling BL, Yu T, Gonzalez R, Kennedy DE, Rosenberg L, Oh W. Children's responses to mother–infant and father–infant interaction with a baby sibling: Jealousy or joy? *Journal of Family Psychology*. 2014;28(5):634-644. doi:10.1037/a0037811

36. Abuhatoum S, Howe N, Della Porta S, Recchia H, Ross H. Siblings' understanding of teaching in early and middle childhood: "Watch me and you'll know how to do it." *Journal of*

Cognition and Development. 2016;17(1):180-196. doi:10.1080/15248372.2015.1042579

37. Howe N, Adrien E, Della Porta S, et al. “Infinity means it goes on forever”: Siblings’ teaching of mathematics during naturalistic home interactions. *Infant and Child Development.* 2016;25(2):137-157. doi:10.1002/icd.1928

38. Howe N, Della Porta S, Recchia H, Ross H. “Because if you don’t put the top on, it will spill”: A longitudinal study of sibling teaching in early childhood. *Developmental Psychology.* 2016;52(11):1832-1842. doi:10.1037/dev0000193

39. Howe N, Recchia H, Porta SD, Funamoto A. “The driver doesn’t sit, he stands up like the Flintstones!”: Sibling teaching during teacher-directed and self-guided tasks. *Journal of Cognition and Development.* 2012;13(2):208-231. doi:10.1080/15248372.2011.577703

40. Klein PS, Feldman R, Zarur S. Mediation in a sibling context: the relations of older siblings’ mediating behaviour and younger siblings’ task performance. *Infant and Child Development*. 2002;11(4):321-333. doi:10.1002/icd.261

41. White N, Ensor R, Marks A, Jacobs L, Hughes C. “It’s mine!” Does sharing with siblings at age 3 predict sharing with siblings, friends, and unfamiliar peers at age 6? *Early Education and Development*. 2014;25(2):185-201. doi:10.1080/10409289.2013.825189

42. Kramer L. Learning emotional understanding and emotion regulation through sibling interaction. *Early Education and Development*. 2014;25(2):160-184. doi:10.1080/10409289.2014.838824

43. Kramer L, Hamilton TN. Sibling caregiving. In: Bornstein MH, ed. *Handbook of Parenting. Vol 1. Children and parenting. 3rd ed*. New York: Routledge; 2019:372-408.

44. Tavassoli, Howe, DeHart. Investigating the development of prosociality through the lens of refusals: Children’s prosocial refusals with siblings and friends. *Merrill-Palmer Quarterly.* 2020;66(4):421. doi:10.13110/merrpalmquar1982.66.4.0421

45. Tavassoli N, Recchia H, Ross H. Preschool children's prosocial responsiveness to their siblings' needs in naturalistic interactions: A longitudinal study. *Early Education and Development.* 2019;30(6):724-742. doi:10.1080/10409289.2019.1599095

46. Tavassoli N, Dunfield K, Kleis A, Recchia H, Conto LP. Preschoolers' responses to prosocial opportunities during naturalistic interactions with peers: A cross-cultural comparison. *Social Development*. 2023;32(1):204-222. doi:10.1111/sode.12620

47. Meunier JC, Roskam I, Stievenart M, De Moortele GV, Browne DT, Wade M. Parental differential treatment, child's externalizing behavior and sibling relationships: Bridging links with child's perception of favoritism and personality, and parents' self-efficacy. *Journal of Social and Personal Relationships*. 2012;29(5):612-638. doi:10.1177/0265407512443419

48. Richmond MK, Stocker CM, Rienks SL. Longitudinal associations between sibling relationship quality, parental differential treatment, and children's adjustment. *Journal of Family Psychology*. 2005;19(4):550-559. doi:10.1037/0893-3200.19.4.550

49. Volling BL. The family correlates of maternal and paternal perceptions of differential treatment in early childhood. *Family Relations*. 1997;46(3):227-236. doi:10.2307/585120

50. Harrist AW, Achacoso JA, John A, Pettit GS, Bates JE, Dodge KA. Reciprocal and complementary sibling interactions: Relations with socialization outcomes in the kindergarten classroom. *Early Education and Development.* 2014;25(2):202-222. doi:10.1080/10409289.2014.848500

51. Maynard AE. Cultural teaching: The development of teaching skills in Maya sibling interactions. *Child Development*. 2002;73(3):969-982. doi:10.1111/1467-8624.00450

52. Maynard AE. Cultures of teaching in childhood: Formal schooling and Maya sibling teaching at home. *Cognitive Development*. 2004;19(4):517-535. doi:10.1016/j.cogdev.2004.09.005

53. Gamble WC, Yu JJ. Young children's sibling relationship interactional types: Associations with family characteristics, parenting, and child characteristics. Early Education and Development. 2014;25(2):223-239. doi:10.1080/10409289.2013.788434

54. Modry-Mandell KL, Gamble WC, Taylor AR. Family emotional climate and sibling relationship quality: Influences on behavioral problems and adaptation in preschool-aged children. *Journal of Child and Family Studies*. 2007;16(1):59-71. doi:10.1007/s10826-006-9068-3

55. Pérez-Granados DR, Callanan MA. Parents and siblings as early resources for young children's learning in Mexican-descent families. *Hispanic Journal of Behavioral Sciences.* 1997;19(1):3-33. doi:10.1177/07399863970191001

56. Chen B, Volling BL. Paternal and maternal rejection and Chinese children's internalizing and externalizing problems across the transition to siblinghood: A developmental cascade model of family influence. *Child Development*. 2023;94(1):288-302. doi:10.1111/cdev.13857

57. Lam CB, McHale SM, Lam CS, Chung KKH, Cheung RYM. Sibling relationship qualities and peer and academic adjustment: A multi-informant longitudinal study of Chinese families. *Journal of Family Psychology.* 2021;35(5):584-594. doi:10.1037/fam0000744

58. Qian G, Chen X, Jiang S, Guo X, Tian L, Dou G. Temperament and sibling relationships: The mediating effect of social competence and behavior. *Current Psychology.* 2022;41(9):6147-6153. doi:10.1007/s12144-020-01080-w

59. Tsamparli A, Halios H. Quality of sibling relationship and family functioning in Greek families with school-age children. *Journal of Psychologists and Counsellors in Schools*. 2019;29(2):190-205. doi:10.1017/jgc.2019.9

60. Buist KL, Metindogan A, Coban S, Watve S, Paranjpe A, Koot HM, van Lier P, Branje SJT, Meeus WHJ. Cross-cultural differences in sibling power balance and its concomitants across three age periods. In: Campione-Barr N, ed. *Power, Control, and Influence in Sibling Relationships across Development. New Directions for Child and Adolescent Development.* Vol 156. Jossey-Bass; 2017:87-104.

61. Buist KL, Vermande M. Sibling relationship patterns and their associations with child competence and problem behavior. *Journal of Family Psychology*. 2014;28(4):529-537. doi:10.1037/a0036990

62. Volling BL, Gonzalez R, Oh W, et al. Developmental trajectories of children's adjustment across the transition to siblinghood: Pre-birth predictors and sibling outcomes at one year. *Monographs of the Society for Research in Child Development.* 2017;82(3):1-215. doi:10/1111/mono.12319

63. Corter C, Abramovitch R, Pepler DJ. The role of the mother in sibling interaction. *Child Development*. 1983;54(6):1599-1605. doi:10.2307/1129823

64. Dunn J. Children's family relationships between two and five: Developmental changes and individual differences. *Social Development.* 1996;5(3):230-250. doi:10.1111/j.1467-9507.1996.tb00083.x

65. Dunn J, Kendrick C. The speech of two- and three-year-olds to infant siblings: 'baby talk' and the context of communication. *Journal of Child Language*. 1982;9(3):579-595. doi:10.1017/S030500090000492X

66. Gass K, Jenkins J, Dunn J. Are sibling relationships protective? A longitudinal study. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*. 2007;48(2):167-175. doi:10.1111/j.1469-7610.2006.01699.x

67. Howe N, Fiorentino LM, Gariepy N. Sibling conflict in middle childhood: Influence of maternal context and mother-sibling interaction over four years. Merrill-Palmer Quarterly. 2003;49(2):183-208. doi:10.1353/mpq.2003.0008

68. Pike A, Oliver BR. Child behavior and sibling relationship quality: A cross-lagged analysis. *Journal of Family Psychology*. 2017;31(2):250-255. doi:10.1037/fam0000248

69. Prime H, Plamondon A, Pauker S, Perlman M, M. Jenkins J. Sibling cognitive sensitivity as a moderator of the relationship between sibship size and children's theory of mind: A longitudinal analysis. *Cognitive Development*. 2016;39:93-102.

doi:10.1016/j.cogdev.2016.03.005

70. Stewart RB, Mobley LA, van Tuyl SS, Salvador MA. The firstborn's adjustment to the birth of a sibling: A longitudinal assessment. *Child Development*. 1987;58(2):341-355. doi:10.2307/1130511

71. Volling BL, Oh W, Gonzalez R, Bader LR, Tan L, Rosenberg L. Changes in children's attachment security to mother and father after the birth of a sibling: Risk and resilience in the family. *Development and Psychopathology*. 2021:1-17. doi:10.1017/S0954579421001310

72. Volling BL, Belsky J. The contribution of mother-child and father-child relationships to the quality of sibling interaction: A longitudinal study. *Child Development*. 1992;63(5):1209-1222. doi:10.2307/1131528

73. Oh W, Volling BL, Gonzalez R. Trajectories of children's social interactions with their infant sibling in the first year: A multidimensional approach. *Journal of Family Psychology.* 2015;29(1):119-129. doi:10.1037/fam0000051

74. Brody GH, Stoneman Z, McCoy JK. Associations of maternal and paternal direct and differential behavior with sibling relationships: Contemporaneous and longitudinal analyses. *Child Development*. 1992;63(1):82-92. doi:10.2307/1130903

75. Dantchev S, Zammit S, Wolke D. Sibling bullying in middle childhood and psychotic disorder at 18 years: a prospective cohort study. *Psychological Medicine*. 2018;48(14):2321-2328. doi:10.1017/S0033291717003841

76. Dirks MA, Persram R, Recchia HE, Howe N. Sibling relationships as sources of risk and resilience in the development and maintenance of internalizing and externalizing problems during childhood and adolescence. *Clinical Psychology Review*. 2015;42:145-155. doi:10.1016/j.cpr.2015.07.003

77. Carpendale JI, Lewis C. The development of social understanding. In: Liben LS, Müller U, Lerner RM, eds. *Handbook of Child Psychology and Developmental Science. Vol. 2.*

Cognitive Processes. Wiley; 2015:381-424.

78. Volling BL. Sibling relationships. In: Bornstein MH, Davidson L, Keyes CLM, Moore KA, eds. *Well-Being: Positive Development Across the Life Course.* Lawrence Erlbaum Associates; 2003:205-220.

79. Howe N, Rosciszewska J, Persram RJ. "I'm an ogre so I'm very hungry!" "I'm assistant ogre": The Social Function of Sibling Imitation in Early Childhood. *Infant and Child Development*. 2018;27(1):e2040. doi:10.1002/icd.2040

80. Howe N, Persram RJ, Bergerorn C. Imitation as a learning strategy during sibling teaching. *Journal of Cognition and Development*. 2019;20(4):466-486. doi:10.1080/15248372.2019.1614591

81. Hughes C, Fujisawa KK, Ensor R, Lecce S, Marfleet R. Cooperation and conversations about the mind: A study of individual differences in 2-year-olds and their siblings. *British Journal of Developmental Psychology.* 2006;24(1):53-72. doi:10.1348/026151005X82893

82. Cutting AL, Dunn J. Conversations with siblings and with friends: Links between relationship quality and social understanding. *British Journal of Developmental Psychology*. 2006;24(1):73-87. doi:10.1348/026151005X70337

83. Howe N, Petrakos H, Rinaldi CM. "All the sheeps are dead. He murdered them": Sibling pretense, negotiation, internal state language, and relationship quality. *Child Development.* 1998;69(1):182-191. doi:10.2307/1132079

84. Youngblade LM, Dunn J. Social pretend with mother and sibling: Individual differences and social understanding. In: Pellegrini AD, ed. *The future of play theory: A multidisciplinary inquiry into the contributions of Brian Sutton-Smith*. State University of New York Press; 1995:221-239.

85. Herrera C, Dunn J. Early experiences with family conflict: Implications for arguments with a close friend. *Developmental Psychology*. 1997;33(5):869-881. doi:10.1037/0012-1649.33.5.869

©2023-2026 ABILIO | PEER RELATIONS

86. Donelan-McCall N, Dunn J. School work, teachers, and peers: The world of first grade. *International Journal of Behavioral Development*. 1997;21(1):155-178. doi:10.1080/016502597385036

87. Dunn J, Munn P. Sibling quarrels and maternal intervention: Individual differences in understanding and aggression. *Journal of Child Psychology and Psychiatry, and Allied Disciplines.* 1986;27(5):583-595. doi:10.1111/j.1469-7610.1986.tb00184.x

88. Siddiqui AA, Ross HS. How do sibling conflicts end? *Early Education and Development*. 1999;10(3):315-332. doi:10.1207/s15566935eed1003_5

89. Vuchinich S. Starting and stopping spontaneous family conflicts. *Journal of Marriage and the Family.* 1987;49(3):591-601. doi:10.2307/352204

90. Abramovitch R, Corter C, Pepler DJ, Stanhope L. Sibling and peer interaction: A final follow-up and a comparison. *Child Development.* 1986;57(1):217-229. doi:10.2307/1130653

91. Tucker CJ, Finkelhor D, Turner H, Shattuck A. Association of sibling aggression with child and adolescent mental health. *Pediatrics*. 2013;132(1):79-84. doi:10.1542/peds.2012-3801

92. Bowes L, Wolke D, Joinson C, Lereya ST, Lewis G. Sibling bullying and risk of depression, anxiety, and self-harm: A prospective cohort study. *Pediatrics*. 2014;134(4):e1032-e1039. doi:10.1542/peds.2014-0832

93. McGuire S, McHale SM, Updegraff K. Children's perceptions of the sibling relationship in middle childhood: Connections within and between family relationships. *Personal Relationships*. 1996;3(3):229-239. doi:10.1111/j.1475-6811.1996.tb00114.x

94. Pickering JA, Sanders MR. Integrating parents' views on sibling relationships to tailor an evidence-based parenting intervention for sibling conflict. *Family Process.* 2017;56(1):105-125. doi:10.1111/famp.12173

95. Ross H, Martin J, Perlman M, Smith M, Blackmore E, Hunter J. Autonomy and authority in the resolution of sibling disputes. In: Killen M, ed. *Children's autonomy, social competence,*

and interactions with adults and other children: Exploring connections and consequences. San Francisco, CA: Jossey-Bass; 1996:71-90.

96. Leijten P, Melendez-Torres GJ, Oliver BR. Parenting programs to improve sibling interactions: A meta-analysis. *Journal of Family Psychology*. 2021;35(5):703-708. doi:10.1037/fam0000833

97. Ross HS. Parent mediation of sibling conflict: Addressing issues of fairness and morality. In: Wainryb C, Recchia H, eds. *Talking about right and wrong: Parent-child conversations as contexts for moral development.* Cambridge University Press; 2014:143-167.

98. Ross HS, Lazinski MJ. Parent mediation empowers sibling conflict resolution. *Early Education and Development.* 2014;25(2):259-275. doi:10.1080/10409289.2013.788425

99. Siddiqui A, Ross H. Mediation as a method of parent intervention in children's disputes. *Journal of Family Psychology*. 2004;18(1):147-159. doi:10.1037/0893-3200.18.1.147

100. Volling BL, Bae Y, Rosenberg L, Beyers-Carlson EEA, Tolman RM, Swain JE. Firstborn children's reactions to mother-doll interaction do not predict their jealousy of a newborn sibling: A longitudinal pilot study. *Journal of Perinatal Education*. 2022;31(4):206-215. doi:10.1891/JPE-2021-0017

101. Jenkins J, Rasbash J, Leckie G, Gass K, Dunn J. The role of maternal factors in sibling relationship quality: a multilevel study of multiple dyads per family: Multilevel study of sibling relationship quality. *Journal of Child Psychology and Psychiatry*. 2012;53(6):622-629. doi:10.1111/j.1469-7610.2011.02484.x

102. Kowal A, Kramer L, Krull JL, Crick NR. Children's perceptions of the fairness of parental preferential treatment and their socioemotional well-being. *Journal of Family Psychology*. 2002;16(3):297-306. doi:10.1037/0893-3200.16.3.297

103. Kowal AK, Krull JL, Kramer L. How the differential treatment of siblings is linked with parent-child relationship quality. *Journal of Family Psychology*. 2004;18(4):658-665. doi:10.1037/0893-3200.18.4.658

104. Kowal A, Kramer L. Children's understanding of parental differential treatment. *Child Development.* 1997;68(1):113-126. doi:10.2307/1131929

105. Perlman J, Howe N. The psychosocial effects of having a sibling with autism spectrum disorder. *Exceptionality Education International*. 2020;30(3):82-101. doi:10.5206/eei.v30i3.13443

106. Miller AL, Volling BL, McElwain NL. Sibling jealousy in a triadic context with mothers and fathers. *Social Development*. 2000;9(4):433-457. doi:10.1111/1467-9507.00137

107. Azmitia M, Hesser J. Why siblings are important agents of cognitive development: A comparison of siblings and peers. *Child Development*. 1993;64(2):430-444. doi:10.2307/1131260

108. Barr R, Hayne H. It's not what you know, it's who you know: Older siblings facilitate imitation during infancy. *International Journal of Early Years Education*. 2003;11(1):7-21. doi:10.1080/09669760304714

109. Recchia HE, Howe N, Alexander S. "You didn't teach me, you showed me": Variations in sibling teaching strategies in early and middle childhood. *Merrill-Palmer Quarterly.* 2008;55(1):55-78. doi:10.1353/mpq.0.0016

110. Howe N, Della Porta S, Recchia H, Funamoto A, Ross H. "This bird can't do it 'cause this bird doesn't swim in water": Sibling teaching during naturalistic home observations in early childhood. *Journal of Cognition and Development.* 2015;16(2):314-332. doi:10.1080/15248372.2013.848869

111. Howe N, Recchia H. Individual differences in sibling teaching in early and middle childhood. *Early Education & Development*. 2009;20(1):174-197. doi:10.1080/10409280802206627

112. Prime H, Perlman M, Tackett JL, Jenkins JM. Cognitive sensitivity in sibling interactions: Development of the construct and comparison of two coding methodologies. *Early Education and Development.* 2014;25(2):240-258. doi:10.1080/10409289.2013.821313

113. Jenkins J. Sibling relationships in disharmonious homes: Potential difficulties and protective effects. In: Boer F, Dunn J, eds. *Children's Sibling Relationships: Developmental and Clinical Issues.* Lawrence Erlbaum Associates; 1992:125-138.

114. Perner J, Ruffman T, Leekam SR. Theory of mind is contagious: You catch it from your sibs. *Child Development.* 1994;65(4):1228-1238. doi:10.2307/1131316

115. Dunn J, Slomkowski C, Beardsall L. Sibling relationships from the preschool period through middle childhood and early adolescence. *Developmental Psychology.* 1994;30(3):315-324. doi:10.1037/0012-1649.30.3.315

116. Stillwell R, Dunn J. Continuities in sibling relationships: Patterns of aggression and friendliness. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*. 1985;26(4):627-637. doi:10.1111/j.1469-7610.1985.tb01645.x

117. Della Porta S, Howe N. Siblings' power and influence in polyadic family conflict during early childhood. In: Campione-Barr N, ed. *Power, Control, and Influence in Sibling Relationships across Development. New Directions for Child and Adolescent Development.* Vol. 156. Jossey-Bass; 2017:15-31. doi:10.1002/cad.20200

118. Haukeland YB, Czajkowski NO, Fjermestad KW, Silverman WK, Mossige S, Vatne TM. Evaluation of "SIBS," An intervention for siblings and parents of children with chronic disorders. *Journal of Child and Family Studies*. 2020;29(8):2201-2217. doi:10.1007/s10826-020-01737-x

119. Kennedy DE, Kramer L. Improving emotion regulation and sibling relationship quality: The more fun with sisters and brothers program. *Family Relations*. 2008;57(5):567-578. doi:10.1111/j.1741-3729.2008.00523.x

120. Kramer L. The essential ingredients of successful sibling relationships: An emerging framework for advancing theory and practice. *Child Development Perspectives*. 2010;4(2):80-86. doi:10.1111/j.1750-8606.2010.00122.x

121. Kramer L, Radey C. Improving sibling relationships among young children: A social skills training model. *Family Relations*. 1997;46(3):237-246. doi:10.2307/585121

122. Ravindran N, Engle JM, McElwain NL, Kramer L. Fostering parents' emotion regulation through a sibling-focused experimental intervention. *Journal of Family Psychology*. 2015;29(3):458-468. doi:10.1037/fam0000084