

Integration in Mixed-Adoption Households: An Exploratory Study of Sibling Structure, Adoption Context, and Family Transition

Abstract

Adoption changes more than the life of the child being adopted. It can also change the roles, routines, and relationships of the family members who were already there. This can be especially important when an adopted child joins a family that already includes biological children, since siblings and parents are adjusting to a new family structure at the same time. Although adoption research has closely examined adoptee adjustment, less attention has been given to biological children growing up alongside adopted siblings. This exploratory study examines the characteristics and perceived transition experiences of families with both adopted and biological children. It combines existing research on attachment, early adversity, sibling relationships, and adoptive-family adjustment with an anonymous survey of 43 respondents. International adoption was reported by 69.8% of respondents, while foster care (62.8%), institutional care (46.5%), medical challenges (44.2%), trauma exposure (39.5%), and neglect (37.2%) were also commonly reported. Among 42 valid responses, 61.9% reported some form of formal preparation for biological children, while 16.7% reported no formal preparation. At the same time, 66.7% reported no or minimal changes to household routines. Of 37 usable open-ended transition responses, 56.8% described the transition as easier. These findings do not establish causal relationships, but they offer a preliminary look at how families can experience adoption as both a major transition and a process that often unfolds within relatively stable routines. They also suggest that biological children deserve more attention during adoption preparation and post-placement support.

Keywords: adoption, adopted children, biological siblings, sibling relationships, family adjustment, adoption transition, early adversity

Introduction

Adoption is often described as a legal process through which parental rights and responsibilities are transferred. But for the people living through it, adoption is much more than a legal event. A child is entering a family that already has its own routines, relationships, expectations, and history. When that family already includes biological children, the transition involves more than helping one child adjust. Everyone has to figure out what the new family structure looks like.

This distinction matters because much of the adoption literature has focused on adopted children themselves. Research has shown that many adopted children make substantial developmental gains after placement, even when they experienced adversity earlier in life. Meta-analytic research has found that most adopted children are well-adjusted, while also showing that severe deprivation or other early adversity can be associated with higher levels of behavioral and emotional difficulty (Juffer & van IJzendoorn, 2005; Juffer et al., 2011). These findings make it important to look at both sides of the transition: what happened before adoption and what happens after a child joins a family.

The family environment after placement is especially important, and siblings are a major part of that environment. Siblings can provide companionship, social learning, emotional support, and a sense of identity. For adopted children, sibling relationships can also shape how they understand adoption and their relationships with birth family members (Farr et al., 2016). At the same time, adoption can change the experience of the biological children already in the household. A new sibling may bring excitement and companionship, but it can also mean changes in parental attention, expectations, responsibilities, and family roles.

Research on biological siblings is beginning to give this perspective more attention. Hunsley, Ekas, and Crawley (2021), for example, interviewed 182 adult biological children who had grown up with adopted siblings. Participants described both positive experiences, such as greater empathy and maturity, and more difficult experiences, including feeling invisible, resentment, parentification, and pressure to mediate family conflict. Their findings suggest that adoption can remain meaningful for biological siblings long after the adoption itself has taken place.

This study builds on that emerging perspective by looking at family characteristics and transition experiences reported through an anonymous survey. The goal is not to prove that one factor causes another. Instead, the study asks what kinds of families are represented in the sample, what adoption circumstances they experienced, and how respondents described the transition.

Research Questions

The central research question is:

How do adoption circumstances, sibling structure, biological-child preparation, and household routine changes characterize the transition experienced by families containing both adopted and biological children?

Three subsidiary questions guide the analysis:

1. What adoption and sibling characteristics are most common within the surveyed families?
2. What forms of pre-adoption adversity were reported?

3. How did respondents characterize biological-child preparation, changes to household routines, and the overall difficulty of the adoption transition?

Literature Review

Adoption, Attachment, and Early Adversity

Attachment theory provides an important way to understand how children develop expectations about caregivers and relationships. Ainsworth (1979) emphasized the importance of early caregiver-child interactions and showed that attachment can develop with a consistent primary caregiver who is not necessarily a biological parent.

For an adopted child, adoption can therefore represent both a disruption and an opportunity. Some children enter adoptive families after experiencing separation from birth parents, multiple caregivers, institutional care, neglect, or other forms of adversity. These experiences matter, but they do not determine what happens next. Research has repeatedly shown that children can demonstrate substantial developmental plasticity after adoption.

Van IJzendoorn and Juffer (2006) found significant developmental catch-up among adopted children across physical, cognitive, and socioemotional domains. Juffer et al. (2011) similarly found that early deprivation can create developmental risks while also emphasizing the potential for recovery when children move into supportive and stable family environments.

This background is important for the present study because adversity was common in the survey sample. Among the 43 responses, 62.8% reported foster care, 46.5% institutional care, 44.2% medical challenges, 39.5% trauma exposure, and 37.2% neglect. These categories could overlap, meaning that one child or family could be represented in several categories.

The survey cannot show that any of these experiences caused later family difficulties. What it does show is that many of the families in the sample were incorporating children whose histories included potentially significant disruption or adversity. Juffer and van IJzendoorn (2005) similarly found that international adoptees with evidence of substantial early deprivation had more behavioral problems than international adoptees without that history, although the overall differences were generally small. In other words, early adversity can increase vulnerability without determining a child's eventual adjustment.

The Adoptive Family as a Developmental Environment

What happens after placement matters just as much as what happened before it. Adoption research increasingly treats adjustment as something that happens within a family system rather than something that belongs only to the adopted child.

Hunsley et al. (2021) provide particularly useful evidence for this perspective. Their study of 182 biological children who grew up with adopted siblings found both positive and negative effects. Participants described empathy, compassion, and maturity, but some also described feeling overlooked, becoming responsible for keeping the family peaceful, or taking on responsibilities that felt more like a parent's role than a sibling's.

This challenges a simple view of adoption in which the adopted child is the only person going through a transition. The adopted child is adjusting to the family, but the family is also adjusting to the adopted child.

Earlier research also suggests that family structure by itself does not determine whether an adopted child will adjust well. Brodzinsky and Brodzinsky (1992) examined 130 adopted children ages six to twelve living in different family structures, including families with older or younger biological and adopted siblings. They found relatively few differences in psychological and academic adjustment across those structures. This suggests that the presence of biological siblings should not automatically be treated as a problem. The quality of the relationships and the environment within the family may matter more than the structure alone.

That distinction is important for this study. A family with both adopted and biological children is not automatically unstable or difficult. The more useful question is how that family handles the transition.

Sibling Relationships and Family Adjustment

Siblings can be one of the main ways an adopted child becomes part of everyday family life. Farr, Flood, and Grotevant (2016) found that sibling dynamics were associated with adoption-related experiences, adjustment, and relationships surrounding adoption and birth-family contact.

Wojciak, McWey, and Helfrich (2013) also found that positive sibling relationships could serve as a protective factor for youth in foster care. In their study of 152 adolescents, sibling relationship quality mediated the relationship between trauma and internalizing symptoms.

These findings suggest that sibling relationships are more than a secondary part of adoption. They can influence how children learn family norms, understand new experiences, and develop a sense of belonging.

Biological children can also affect how an adopted child adjusts. Tan (2008), studying 40 families with biological children and younger children adopted from China, found that adopted children's adjustment was associated with the adjustment of the biological children. The effect was small, but the finding is still important because it shows that adjustment can move in both directions within a family.

That reciprocal idea is central to this study. The survey does not only ask what happened to adopted children. It also asks what the family looked like and how the family changed around the adoption.

Age, Sibling Structure, and Adoption Context

The age at which a child is adopted is another important part of the picture. Children who experienced adversity early in life may have different needs depending on when the adversity occurred, how long it lasted, and how severe it was. Research on institutional deprivation shows that early environments can have lasting effects while also demonstrating that children can recover considerably after moving into stable caregiving environments (Juffer et al., 2011; Zeanah et al., 2011).

The survey included a wide range of adoption ages. Among the 40 valid responses, 7.5% involved newborn or infant adoption, 15.0% toddler or preschool adoption, 30.0% school-age adoption, 25.0% adolescent adoption, 10.0% adult adoption, and 12.5% families with multiple adopted children at different ages.

Sibling age gaps also varied. Of the 35 responses with usable age-gap information, 22.9% reported siblings less than one year apart, 31.4% reported a one-to-two-year gap, 25.7% reported a three-to-five-year gap, and 20.0% reported a gap of six or more years. This variation matters because sibling relationships are shaped by developmental stage and established family roles, not simply by whether children are biologically related.

Methodology

Research Design

This study used an exploratory mixed-methods design. It combines descriptive analysis of an anonymous survey with an integrative review of existing adoption research.

The quantitative portion of the study consisted of an anonymous survey asking about family composition, adoption characteristics, pre-adoption experiences, preparation of biological

children, household routines, and perceptions of the adoption transition. The dataset contained 43 responses.

The qualitative portion came from an open-ended question asking respondents to describe the adoption transition. Responses were grouped into broad themes: “Easier,” “Harder/Challenging,” “Mixed/Both/Depends,” “Difficult at first, now close,” and “N/A/Unknown/Neither/Too young.”

The study is intentionally descriptive and exploratory. Because the dataset consists of aggregated survey responses rather than respondent-level observations connecting every variable to every outcome, it cannot test causal relationships or determine whether one family characteristic predicts adjustment.

Data Processing

Survey responses were organized using the categories in the original dataset. Single-choice questions were summarized with frequencies and percentages. The pre-adoption-experience question allowed respondents to select more than one experience, so those percentages do not add to 100%.

Some questions also included missing or non-applicable responses. These were kept as separate categories when appropriate rather than being counted as negative responses. For example, the overall survey had 43 respondents, but the preparation question had 42 usable responses and the open-ended transition question had 37 usable responses. The Results section therefore uses the appropriate denominator for each question.

The open-ended responses were coded thematically by the researcher. Because there was only one coder, these results should be viewed as exploratory rather than as a formally validated qualitative analysis.

Ethical Considerations

The survey was anonymous and analyzed at the aggregate level. No identifying information about individual respondents or specific families is reported. Because adoption histories can involve sensitive family information, the analysis intentionally avoids details that could identify participants.

For future journal submission, documentation should be retained showing how respondents were recruited, what consent language accompanied the survey, and whether the school or journal requires faculty or institutional review for student research involving human participants. No institutional or faculty approval is claimed here unless such approval was actually obtained.

Results

Family and Sibling Structure

The survey showed a wide range of family structures. The most common household had three siblings, reported by 44.2% of respondents. Two siblings were reported by 25.6%, while 4.7% reported four siblings, 4.7% reported five, and 14.0% reported six.

Biological children were common in the surveyed families. Two biological children was the most frequent response at 37.2%, followed by one biological child at 27.9%. For adopted children, one adopted child was most common at 53.5%, followed by two at 23.3% and three at 14.0%.

Table 1. Selected Family-Structure Characteristics

Variable	Most common response	n	%
Total siblings	3 siblings	19	44.2%
Biological children	2	16	37.2%
Adopted children	1	23	53.5%
Adopted child is youngest	Yes	16	37.2%
Kinship adoption	No	41	95.3%
International adoption	Yes	30	69.8%
Different background	Yes	31	72.1%

Birth order also showed a noticeable pattern. In 37.2% of responses, the adopted child was the youngest child in the family. In another 11.6%, multiple adopted children occupied the youngest positions. Adopted children were reported as middle children in 18.6% of responses and oldest children in 9.3%. The sample therefore included substantial variation, but adopted children were often joining the family in a relatively young position.

Adoption Type and Background

International adoption was the most common adoption type in the sample. Thirty of the 43 respondents, or 69.8%, reported international adoption. Domestic private adoption accounted for 16.3%, while several respondents reported combinations involving international adoption, domestic adoption, foster-to-adopt, or kinship adoption.

The survey also showed that adopted children often had backgrounds that differed from those of their families. Seventy-two percent of respondents reported a different background, while 14.0% reported generally similar backgrounds and 9.3% reported partial or mixed similarity.

This matters because international and transracial adoption can involve questions of identity, culture, race, and belonging alongside the more familiar challenges of becoming siblings and adjusting to a new family structure.

Pre-Adoption Experiences

One of the clearest patterns in the survey was the frequency of reported pre-adoption adversity.

Table 2. Reported Pre-Adoption Experiences

Experience	n	%
Foster care	27	62.8%
Institutional care	20	46.5%
Medical challenges	19	44.2%

Trauma exposure	17	39.5%
Neglect	16	37.2%
Unknown history	11	25.6%
None known	5	11.6%
Abuse	1	2.3%

Because respondents could report more than one experience, these categories are not mutually exclusive. Foster care appeared in nearly two-thirds of responses, institutional care in almost half, and medical challenges in 44.2%. Trauma exposure and neglect were also common.

These findings provide important context for the family-transition results. Many families in the sample were not simply welcoming a child into the household. They were also navigating histories that could include significant disruption or adversity.

At the same time, the findings should not be read as suggesting that adopted children are inherently traumatized or difficult to parent. Research consistently shows substantial resilience and developmental catch-up following adoption (Juffer & van IJzendoorn, 2005; Juffer et al., 2011).

Preparation of Biological Children

The survey also asked whether biological children were prepared for the adoption. Of the 42 valid responses, 18 respondents (42.9%) reported preparation involving books, discussions, and counseling. Another eight (19.0%) reported preparation through books and parent-child discussions.

Together, 26 of 42 respondents, or 61.9%, reported some form of formal preparation. Seven respondents (16.7%) reported no formal preparation, four (9.5%) said the biological child was too young to prepare, and five (11.9%) reported that preparation was unknown.

Table 3. Preparation of Biological Children

Preparation	n	% of valid responses
Books, discussions, and counseling	18	42.9%
Books and parent-child discussions	8	19.0%
No formal preparation	7	16.7%
Too young to prepare	4	9.5%
Unknown	5	11.9%

This finding is important because previous research suggests that biological siblings can experience adoption in very different ways, including positive growth as well as feelings of displacement or responsibility (Hunsley et al., 2021). The survey cannot tell us whether preparation caused easier transitions, but it does show that many families in the sample were already including biological children in some part of the preparation process.

Changes to Household Routines

The survey did not show the level of household disruption that might be expected from such a major family transition. Of the 42 valid responses, 28 respondents (66.7%) reported no or minimal changes to household routines. Eight (19.0%) described some changes or normal disruption, while four (9.5%) said routines changed substantially. Two responses (4.8%) were classified as COVID-related or otherwise difficult to categorize.

Table 4. Reported Changes to Household Routines

Routine change	n	%
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No/minimal change	28	66.7%
Somewhat/normal disruption	8	19.0%
Yes, changed	4	9.5%
COVID/other	2	4.8%

This finding complicates the idea that integrating an adopted child necessarily requires a family to completely reorganize its daily life. In this sample, most respondents described continuity rather than major disruption.

However, the survey only measured whether routines changed. It did not measure whether routine stability improved psychological outcomes or family cohesion. Therefore, the data cannot show that maintaining routines caused better adjustment.

Perceived Difficulty of the Adoption Transition

The final survey question asked respondents to describe the adoption transition in their own words. Thirty-seven responses contained enough information to be coded.

Twenty-one responses (56.8%) were coded as describing the transition as easier. Four (10.8%) described it as mixed, both, or dependent on circumstances. Two (5.4%) described it as harder or challenging. One response (2.7%) described the transition as difficult at first but ultimately leading to close sibling relationships. One response (2.7%) described it as slightly easier, and one (2.7%) as slightly harder. Seven responses (18.9%) could not be meaningfully classified because the respondent indicated that the experience was unknown, not applicable, neither, or that the child was too young to know.

Table 5. Perceived Adoption Transition

Coded theme	n	%
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Easier	21	56.8%
N/A/unknown/neither/too young	7	18.9%
Mixed/both/depends	4	10.8%
Harder/challenging	2	5.4%
Difficult initially, now close	1	2.7%
Slightly easier	1	2.7%
Slightly harder	1	2.7%

The predominance of positive responses is notable, but it does not mean every transition was easy. Some respondents described an initially difficult period followed by close sibling relationships. This suggests that adjustment may be better understood as a process that develops over time rather than as a single moment when a child joins the household.

Discussion

Taken together, the survey points to three broad patterns. First, the families in the sample were highly varied in their adoption circumstances. International adoption was common, and many respondents reported differences in background between the adopted child and family. Many also reported foster care, institutional care, medical challenges, trauma exposure, or neglect before adoption.

Second, these potentially complex histories did not usually correspond with major changes in household routines. Two-thirds of valid responses reported no or minimal routine changes. Third, respondents generally described the transition positively, although some reported meaningful challenges or an initially difficult adjustment.

These patterns fit with a family-systems view of adoption. An adopted child is not simply entering a finished family structure. The family changes as the child becomes part of it. Parents adjust, siblings adjust, routines may shift, and everyone has to develop a new understanding of what the family looks like.

Adoption as Reciprocal Adjustment

The survey supports thinking about adoption as a process of reciprocal adjustment. The adopted child is learning how to function within an established family, but the existing family members are also learning how to live with a new sibling.

Hunsley et al. (2021) provide an important comparison. Their 182 biological participants described both positive and negative effects of growing up with adopted siblings. Some became more empathetic and mature, while others experienced invisibility, resentment, parentification, or pressure to keep the family at peace.

The present survey cannot tell us whether those experiences occurred among its respondents because it did not directly measure parentification, resentment, or psychological symptoms. Still, the finding that 61.9% of respondents reported some form of biological-child preparation suggests that families may already recognize that existing children are part of the transition.

That matters because biological children are not simply watching an adoption happen. They are living through the creation of a new family structure too.

The Importance of Pre-Adoption Adversity Without Determinism

The high level of reported pre-adoption adversity deserves careful attention. More than six in ten responses included foster-care experience, and nearly half included institutional care. Yet most respondents still described the overall transition as easier or relatively positive.

This pattern reinforces an important point from adoption research: risk is not destiny. Juffer and van IJzendoorn (2005) found that international adoptees generally showed only small differences in behavioral problems compared with nonadopted controls, although greater pre-adoption adversity was associated with more difficulty within the international-adoptee group. At the same time, most international adoptees were well-adjusted.

Juffer et al. (2011) similarly emphasized developmental recovery and the importance of the adoptive family environment after early adversity.

The present findings therefore should not be framed as showing that adversity produces family problems. Instead, they show that families can incorporate children with significant pre-adoption histories while respondents still describe the overall family transition positively.

Stability and Household Continuity

One of the most interesting descriptive findings was how often household routines remained stable. Two-thirds of valid responses reported no or minimal changes.

This is important because it challenges the assumption that bringing an adopted child into a family necessarily means abandoning the family's previous structure. Continuity may give existing family members something familiar to hold onto while the new child becomes part of everyday family life.

There is an important limitation, however. The survey cannot tell us whether routine stability actually improves adjustment. It is also possible that families experiencing fewer challenges were simply more able to maintain their routines. Since this study is cross-sectional and descriptive, either causal interpretation would go beyond the evidence.

The most defensible conclusion is narrower: routine continuity was common in the surveyed families and existed alongside predominantly positive descriptions of the transition.

Future research should directly examine whether routine stability is associated with sibling relationship quality, perceived family cohesion, or child adjustment.

Biological-Child Preparation

The preparation findings may be among the most practically useful results of the study. Nearly 62% of valid responses reported some form of formal preparation for biological children, including books, parent-child discussions, and counseling.

This fits with the growing recognition that biological siblings deserve attention during the adoption process. Hunsley et al. (2021) found that adoption can be a major life event for biological children, with effects that may continue into adulthood. Tan (2008) also found that biological children's adjustment can be related to the adjustment of younger children adopted into the family.

These findings suggest that adoption preparation should not focus only on adoptive parents and the child being adopted. Biological children may also need age-appropriate opportunities to ask questions, understand what adoption means, talk about worries, and prepare for changes they may notice at home.

Importantly, preparing biological children does not mean making them responsible for the adopted child's adjustment. It means recognizing that they are experiencing the transition too.

Sibling Relationships as a Potential Protective Factor

The literature increasingly points to sibling relationships as an important source of support. Farr et al. (2016) found that sibling dynamics were associated with adoption-related experiences and adjustment, while Wojciak et al. (2013) found that positive sibling relationships could mediate the association between trauma and internalizing symptoms among youth in foster care.

The family structures in this survey provide additional context. In 37.2% of responses, the adopted child was the youngest, and in another 11.6%, multiple adopted children occupied the youngest positions. Older biological children in these families may naturally become models, companions, or sources of social learning.

At the same time, being an older sibling should not automatically mean becoming a caregiver. Hunsley et al. (2021) identified parentification and peacemaking as potentially difficult experiences for biological siblings. Sibling involvement should therefore be encouraged as a way to build relationships, not as a substitute for parental responsibility.

Limitations

This study has several limitations that substantially affect how its findings should be interpreted.

First, the sample is small. Although 43 responses provide useful preliminary information, they are not enough to support broad population-level conclusions.

Second, the sample was not selected through probability sampling. The respondents may therefore differ from the wider population of adoptive families. For example, families with especially positive or negative experiences may have been more likely to participate.

Third, the survey relies on self-report. People may remember adoption experiences differently depending on how much time has passed since the adoption, creating the possibility of recall bias.

Fourth, the dataset is aggregated. Because the spreadsheet summarizes responses by category rather than preserving respondent-level links among variables, the study cannot determine whether families reporting foster-care histories were more likely to report difficult transitions, or whether biological-child preparation was associated with more positive outcomes.

Fifth, some survey questions had missing or non-applicable responses. Reporting the appropriate denominator for each question makes this transparent, but the missing responses still limit the amount of information available for some analyses.

Sixth, the open-ended responses were coded by a single researcher. The categories were useful for identifying broad patterns, but they should not be treated as equivalent to a formal qualitative analysis involving multiple independent coders.

Finally, the survey did not use validated psychological measures of attachment, family cohesion, sibling relationship quality, trauma symptoms, or child adjustment. Terms such as “successful integration” should therefore be used carefully. This study primarily describes family structures and respondents' perceptions of the transition rather than clinical or psychological outcomes.

Future Research

Future research should move beyond describing family characteristics and follow the entire family system over time.

One especially useful direction would be to follow biological siblings before adoption, immediately after placement, and several years later. This could show whether early feelings of uncertainty or displacement persist, fade, or develop into positive changes such as greater maturity or empathy.

A second direction is to examine whether preparation of biological children is actually associated with adjustment. The present study shows that preparation is relatively common, but it cannot tell us whether one preparation strategy works better than another. Future studies could compare counseling, family discussions, books, peer support, and structured adoption education.

Third, researchers should examine whether the age at adoption is related to sibling adjustment. The current sample includes infants, preschool-aged children, school-aged children, adolescents, and adults, but the aggregated data do not allow these groups to be compared directly.

Fourth, future research should pay closer attention to cultural and racial differences. International adoption made up 69.8% of this sample, and 72.1% of respondents reported a different background between the adopted child and family. Cultural identity may therefore be an important part of family integration that goes beyond ordinary sibling adjustment.

Finally, researchers should continue studying biological siblings themselves. Research in this area is growing, but it remains much smaller than the body of research focused on adoptee outcomes. A better understanding of biological siblings' experiences could improve adoption preparation, family counseling, and post-adoption services.

Conclusion

Adoption into a family that already includes biological children is not simply the addition of one child to an established household. It is a process in which family roles, routines, relationships, and identities can change.

This exploratory study of 43 survey responses found substantial variation in both family structure and adoption circumstances. International adoption was common, and many respondents reported histories involving foster care, institutional care, medical challenges, trauma exposure, or neglect. Despite that complexity, most respondents reported no or minimal changes to household routines, and more than half of the usable open-ended responses described the transition as easier.

These findings should not be taken to mean that adoption is always easy or that early adversity has no lasting effects. Instead, they add to a more nuanced understanding of adoption as a family-wide process. Existing research shows that adopted children can experience significant developmental recovery, while also suggesting that sibling relationships and the experiences of biological children deserve more attention.

Perhaps the most important shift is in the question we ask. Rather than asking only whether an adopted child successfully enters an existing family, it may be more useful to ask how the entire family changes as it creates a new sense of belonging.

Adoption changes legal relationships, but it also changes relationships in everyday life. Understanding that process means looking at adopted children, biological children, parents, and siblings as connected parts of the same family system.

References

Ainsworth, M. D. S. (1979). Infant–mother attachment. *American Psychologist*, 34(10), 932–937. <https://doi.org/10.1037/0003-066X.34.10.932>

Brodzinsky, D. M. (2011). Children's understanding of adoption: Developmental and clinical implications. *Professional Psychology: Research and Practice*, 42(2), 200–207. <https://doi.org/10.1037/a0022415>

Brodzinsky, D. M., & Brodzinsky, A. B. (1992). The impact of family structure on the adjustment of adopted children. *Child Welfare*, 71(1), 69–76. <https://pubmed.ncbi.nlm.nih.gov/1737523/>

Farr, R. H., Flood, M. E., & Grotevant, H. D. (2016). The role of siblings in adoption outcomes and experiences from adolescence to emerging adulthood. *Journal of Family Psychology*, 30(3), 386–396. <https://doi.org/10.1037/fam0000173>

Howe, N., Ross, H. S., & Recchia, H. (2010). Sibling relations in early and middle childhood. In P. K. Smith & C. H. Hart (Eds.), *The Wiley-Blackwell handbook of childhood social development*. Wiley. <https://doi.org/10.1002/9781444390933.ch19>

Hunsley, J. L., Ekas, N. V., & Crawley, R. D. (2021). An exploratory study of the impact of adoption on adoptive siblings. *Journal of Child and Family Studies*, 30, 311–324. <https://doi.org/10.1007/s10826-020-01873-4>

Juffer, F., & van IJzendoorn, M. H. (2005). Behavior problems and mental health referrals of international adoptees: A meta-analysis. *JAMA*, 293(20), 2501–2515. <https://doi.org/10.1001/jama.293.20.2501>

Juffer, F., Palacios, J., Le Mare, L., Sonuga-Barke, E. J. S., Tieman, W., Bakermans-Kranenburg, M. J., Vorria, P., van IJzendoorn, M. H., & Verhulst, F. C. (2011). Development of adopted children with histories of early adversity. *Monographs of the Society for Research in Child Development*, 76(4), 31–61. <https://doi.org/10.1111/j.1540-5834.2011.00627.x>

Neil, E. (2012). Making sense of adoption: Integration and differentiation from the perspective of adopted children in middle childhood. *Children and Youth Services Review*, 34(2), 409–416. <https://doi.org/10.1016/j.childyouth.2011.11.011>

Noller, P. (2005). Sibling relationships in adolescence: Learning and growing together. *Personal Relationships*, 12(1), 1–22. <https://doi.org/10.1111/j.1350-4126.2005.00099.x>

Sharma, A. R., McGue, M. K., & Benson, P. L. (1998). The psychological adjustment of United States adopted adolescents and their nonadopted siblings. *Child Development*, 69(3), 791–802. <https://doi.org/10.1111/j.1467-8624.1998.tb06243.x>

Tan, T. X. (2008). Impact of biological children's adjustment on their siblings who were adopted from China. *Adoption Quarterly*, 11(4), 278–295. <https://doi.org/10.1080/10926750802569814>

van IJzendoorn, M. H., & Juffer, F. (2006). The Emanuel Miller Memorial Lecture 2006: Adoption as intervention. Meta-analytic evidence for massive catch-up and plasticity in physical, socio-emotional, and cognitive development. *Journal of Child Psychology and Psychiatry*, 47(12), 1228–1245. <https://doi.org/10.1111/j.1469-7610.2006.01675.x>

Wojciak, A. S., McWey, L. M., & Helfrich, C. M. (2013). Sibling relationships and internalizing symptoms of youth in foster care. *Children and Youth Services Review*, 35(7), 1071–1077. <https://doi.org/10.1016/j.childyouth.2013.04.021>

Zeanah, C. H., Gunnar, M. R., McCall, R. B., Kreppner, J. M., & Fox, N. A. (2011). Sensitive periods. *Monographs of the Society for Research in Child Development*, 76(4), 147–162.
<https://doi.org/10.1111/j.1540-5834.2011.00631.x>

Original empirical data: Anonymous survey conducted by the author; $n = 43$. Survey data analyzed in the accompanying research dataset.