# An Analytical Model of the Effect of Sibling Relationships on Children's Socio-Emotional Competence: Based on the OECD Six-Dimensional Framework

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### **Abstract**

To explore the complex relationship between the four dimensions of sibling relationships and the sixdimensional framework of socioemotional competence, including its subdimensions, a comprehensive and meticulous study was carried out. Socioemotional competence is one of the fundamental core literacies for young people in the new era and a driving factor in shaping life achievements. With the steady implementation of the three-child policy, the family structure is undergoing profound changes, and the number of multichild families is increasing daily. Against this backdrop, the significance of sibling relationships has become increasingly prominent. During the study, a wealth of existing information and data was sifted through and deeply analysed within the context of the OECD multidimensional framework. Ultimately, the study constructed a detailed analytical model of the effects of the subdimensions of sibling relationships on the subdimensions of socioemotional competence and arrived at specific and feasible parenting strategies to address sibling relationships: 1) sibling warmth should be promoted; 2) sibling conflict should be correctly navigated; 3) benign sibling rivalry should be facilitated; and 4) reciprocal interactions of equal rights of siblings should be fostered. This study not only has significant practical implications for promoting the holistic development of individuals, optimizing family parenting arrangements, and fostering harmonious social progress but also enriches the theoretical framework of socioemotional competence, offering new perspectives and a foundation for future research on multichild families.

### **Keywords**

sibling relationships, socioemotional competence, parenting strategies, OECD framework

# 1. Introduction

### 1.1 Background and Purpose

According to ecosystem theory, the family as a microsystem has a more direct and significant impact on individuals than other levels of the environment do. Since the implementation of the "three-child" policy in

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2021, an increasing number of families have given birth to subsequent children and entered a new era of "sibling relationships". In addition to traditional marriage and parent—child relationships, sibling relationships have emerged as a topic of great interest in "multichild families".

Currently, most of the research has focused on the impact of sibling relationships on individual competencies in children's social development, while there are relatively few overall overviews of socioemotional competence. In addition, existing studies have focused mainly on the five core elements of socioemotional competence proposed by the CASEL in 2015.

The purpose of this study is to explore the pathway through which the four dimensions of sibling relationships affect children's socioemotional competence via the six-dimensional framework developed by the OECD, thereby proposing corresponding parenting strategies.

#### 1.2 Process and Method

This desktop research mainly adopts the literature review method. The research content and data mainly come from papers published on platforms such as CNKI and Google Scholar, with a focus on empirical studies conducted in the past five years. First, a preliminary screening was carried out on the basis of the titles and abstracts. The key chapters of the literature closely related to the research topic are then selected for detailed reading. Finally, individual studies that were inconsistent with the conclusions of the majority of studies were excluded. An in-depth analysis revealed that different types of sibling relationships play unique roles in the development of socioemotional competence, such as responsibility, empathy, and emotional control. These aspects have been systematically characterized, contributing to the development of analytical models.

In terms of the text structure, this paper first objectively analyses the main influencing factors of sibling relationships, then clarifies the analytical models of the influencing factors of different types of sibling relationships on the various subdimensions of socioemotional competence, and ultimately provides a series of practical parenting strategies for parents of families with multiple children.

### 1.3 Definition of Concepts

The sibling relationship refers to the sum of physical, verbal and nonverbal interactions between two or more siblings. These relationships are based on blood ties and are characterized as "obligatory", direct and enduring, spanning a period of time that extends beyond the parent—child relationship. In a self-administered questionnaire designed by Furman and Buhrmester (1985), sibling relationships were categorized into four main types, namely, sibling warmth, sibling conflict, sibling rivalry and sibling relative status/powers, on the basis of scores on different dimensions.

Sibling relationships foster a context within which children's socioemotional competence increases, and the concept of socioemotional competence was first introduced by Salovey & Mayer. In 1997, CASEL defined social-emotional competencies as the ability of an individual to understand and manage his or her own emotions, to set and achieve positive goals, to understand the perspectives of others, to establish and maintain good relationships, to make responsible decisions, and to deal constructively with interpersonal relationships (Elias et al., 1997). In 2017, the OECD embarked on the implementation of the SSEC program, which is based on the Big Five Theory, and carefully constructed a six-dimensional measurement framework covering socioemotional competence. The framework specifically includes "Task Competence," "Emotional Regulation," "Collaborative Skills," "Openness," "Interactional Skills," and "Other Composite Abilities" (Figure 1).

# 2. Explicit Influences on Sibling Relationships

The concept of family structure is broad, encompassing a wide variety of forms, including the nuclear family, the main family, the joint family, the single family, the families with disabilities, and many others. Family structure has been shown to have a direct influence on the nature of sibling relationships. Research has demonstrated that siblings in nuclear families exhibit strong emotional bonds alongside latent tendencies toward competition and envy regarding the allocation of parental care, material resources, and familial status (Chen et al., 2016). In the context of families coping with disability, a notable observation is that older siblings often assume a role in providing care to younger siblings, a phenomenon that can be attributed to the absence

of adequate parental affection. This dynamic fosters increased sibling solidarity, a phenomenon that underscores the protective function of the family environment.

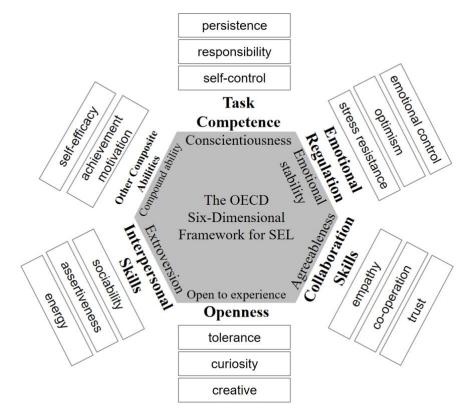


Figure 1: OECD Six-Dimensional Measurement Framework for Socioemotional Competence

In two-child families, sibling gender combinations are mainly categorized into same-sex and opposite-sex combinations, and young children of different genders show significant differences in emotional support and sibling conflict. Sibling relationships have been found to be closer and more emotionally supportive in same-sex combinations, with female–female combinations having the closest relationships and male–female combinations having relatively poorer sibling relationships (Recchia & Howe, 2009). Siblings of different sexes specialize in different areas, have fewer common themes, and are more likely to be emotionally vulnerable to sibling conflict.

According to data published by the National Health and Family Planning Commission, the proportion of families with two children nationwide constituted 38.9% in 2022, and the proportion of families with three or more children accounted for 15.0%. These data reflect the development of the family structure of the population in China in recent years and show a clear trend of change. Wang (2021) conducted a study using information from the China Education Tracking Survey (CEPS) and revealed an inverse relationship between family size and educational resource accessibility; specifically, only children tend to have a "gap-filling effect" due to the centralized investment of family resources, i.e., they receive more attention and support from academics to compensate for possible deficits, whereas nononly children show a "meritocracy effect," which supports their further upgrading and development in academics, as well as a "supportive effect". They tend to be supported academically.

Research has shown that different birth orders shape their different positions in the family and parenting environments (Adler, 1932) by influencing, among other things, the attitudes of nurturers and siblings toward their children, which in turn affects their personality traits, social behaviors (Huang H et al., 2024), and mental health. Firstborns feel threatened by the dispersal of their resources during the transitional period of their younger siblings' births, leading to significantly higher stress levels (Kramer & Ramsburg, 2002), a range of emotional problems, and even sibling rivalry disorders (Su, 2017); younger siblings receive more benefit from the help, guidance, care, and support provided by their older siblings and are therefore more likely to want to

maintain a higher level of closeness with their older siblings than their eldest son is to them (Buhrmester & Furman, 1990).

The age interval between births also influences sibling relationships. The greater the age interval between them is, the lower the level of mutual jealousy and conflict (Qian, Li, Yang, Li, Tian, & Dou, 2021). However, it has also been suggested that a larger age interval may lead to hidden problems among siblings (Fenwick et al., 2013). Thus, too small or too large an age difference may reduce the quality of sibling relationships.

Parent–child relationships are associated with sibling relationships. Numerous findings support that positive parent–child relationships are positively correlated with good sibling relationships (Buist et al., 2013; Hakvoort et al., 2010). However, the results also support the compensation hypothesis, in which poor paternity makes sibling relationships closer and warmer (Hansla et al., 2008). The type of attachment parents form in their early interactions with their children influences the severity of the threat they perceive, which relates to how the child responds to the threat posed by the sibling (Chung & Harris, 2018). For example, people with anxious attachment style have lower levels of self-esteem and are more likely to be concerned with and doubt their own lovability and worth; thus, they have higher levels of jealousy (Diao J et al., 2020). Children with secure parent–child attachments, on the other hand, have more positive perceptions of the outside world and of the self, which helps buffer perceptions of interpersonal threats (Bowlby, 1973) and results in less defiant and aggressive behavior (Teti & Ablard, 1989).

# 3. Analysis of the Effect of Sibling Relationships on Dimensions of Socioemotional Competence

### 3.1 Analysis of the Effect of Sibling Warmth on Socioemotional Competence

The concept of "sibling warmth" emphasizes its positive qualities of intimacy and mutual support. The relationship is characterized not only by a deep emotional connection and a shared experience of growth but also by more sharing and prosocial behaviours. Sibling warmth establishes a unique form of tacit understanding and trust accompanied by positive emotional experiences, which, taken as a whole, are significantly and positively correlated with the level of development of socioemotional competence (Lei, 2023).

In terms of task competence, close interactions between siblings provide a good platform for social interactions for young children in multiple families at an earlier age. During interactions such as role-playing games, pretend play, etc., children better perceive the responsibilities of different roles, which helps to build social understanding (Wang, 2021). King et al. (2021) reported that older children tend to be more psychologically resilient and have a stronger sense of responsibility than their younger siblings do.

In terms of emotional regulation, positive interactions between siblings provide learning opportunities for children to correctly recognize emotions, secure sibling attachment further influences the use of emotional strategies, and positive emotion regulation inversely contributes to the improvement of sibling relationships (Yan, 2022). Sibling warmth is significant in reducing negative emotions, with children preferring to choose close siblings for emotional sharing as a way to reduce negative emotions after traumatic events (Zhao & Yu, 2017). The supportive interpersonal relationships that siblings provide to each other help children recognize and express emotions.

The effects of warm and intimate sibling relationships on children's collaboration skills are manifested mainly in the aspects of empathic ability and sibling collaboration in elderly care. Lam et al. (2012) reported that the greater the level of sibling intimacy is, the better the empathic ability of the subjects, and the more prosocial behaviors they exhibit. In addition, sibling collaboration in elderly care is a common concern in the era of multichild families, and close sibling relationships are conducive to negotiation and cooperation among multiple siblings to fulfil the obligation of supporting the elderly together.

The degree of perceived warmth of children in sibling relationships also has a significant effect on openness. Sibling warmth is a protective factor for peer acceptance, and positive sibling support facilitates the development of children's peer relationships. Liu's (2020) survey research revealed that children with close sibling relationships tend to score higher on tests of perspective-taking ability and its subdimensions and tend to be more open and tolerant of other people's emotions and differing viewpoints.

Sibling warmth also has positive implications for children's interpersonal skills. Securing sibling attachment promotes positive attributions in children's interpersonal interactions, and children are more likely to transfer social skills from sibling relationships to peer interactions and build positive peer relationships. A study by Xu et al. (2020) revealed that first-born children with higher scores on the warmth dimension performed better on social proactivity and scored lower on social impairment.

In the dimension of other composite competencies, research has shown that sibling closeness is strongly associated with children's self-efficacy. Having warm sibling relationships gives children greater emotional understanding and self-efficacy and reduces the impact of social behavior problems and negative emotions (Chen F et al., 2023).

## 3.2 Analysis of the Impact of Sibling Conflict on Socioemotional Competence

Within a family environment, sibling conflict is a common occurrence that occurs because two or more people share the same biological parents in an intact family unit and are incompatible with their behavior, goals, or activities. According to Sun and Zhang (2018), this type of conflict is regarded as permanent, universal, and inevitable because family members encounter interpersonal challenges that intensify as they age.

Sibling conflict negatively correlates with task competence, particularly with responsibility and self-control. Within a familial context, an increase in sibling conflict has been reported to result in a reduction in an individual's sense of responsibility, which, in turn, has a negative effect on the development of self-control. For example, when first-born children experience fatigue and stress from caring for their younger siblings, their sense of responsibility may be negatively impacted, which in turn causes a reduction in self-control. Research has shown that frequent sibling conflict might render first-born children more prone to distraction when confronted with tasks and more difficult to sustain in achieving their goals, thus impeding the improvement of their task competence (Zhang, 2022).

The ability of individuals to regulate their emotions is complicated by the presence of conflict between siblings. Research has indicated a negative correlation between sibling conflict and optimistic emotional attitudes; that is, as the amount of conflict increases, it becomes more challenging for individuals to maintain an optimistic outlook. Furthermore, Bian et al. (2020) posit that first-born children, following the arrival of a second child, may experience adverse effects due to alterations in familial dynamics and a perceived decrease in parental attention, consequently impacting their optimism. In the context of emotional regulation, the impact of sibling conflict is not unidirectional but rather is multifaceted and intricate in nature. Moderate sibling conflict has been shown to enhance children's emotional intelligence, perspective-taking skills, and problem-solving abilities (Fang, 2018). Conversely, excessive conflict can result in adverse emotional outcomes, such as resentment and low self-esteem. The oldest children often assume a greater share of familial responsibility, and their emotional challenges tend to be more pronounced. In contrast, second-born children demonstrate more stable emotional responses. The varying effects of sibling conflict on emotional regulation are evident to a certain degree.

A significant factor that impacts an individual's capacity for collaboration is the nature of interaction with their siblings. Sibling conflict has been demonstrated to be negatively associated with empathy, and reduced levels of conflict have been shown to be more conducive to the development of empathy in children (Yuan et al., 2022). Furthermore, the relationship between conflict and cooperation ability is nonlinear; moderate conflict provides children with opportunities for negotiation and compromise, thereby enhancing cooperation ability. Conversely, excessive conflict has been shown to weaken the willingness to cooperate and lead to the formation of competitive interaction patterns (Kramer & Gottman, 1992). Frequent conflict also undermines the foundation of trust between siblings, and a lack of conciliatory behaviors further decreases the level of trust.

In this work, the relationship between sibling conflict and an individual's ability to be open is examined, with an emphasis on inclusivity being given particular attention. It has been shown that a desire for conflict in the sibling setting fosters inclusive thinking, which helps children develop the ability to accept different viewpoints and recognize different requirements. Research has shown that children who are first-born can modify their behavior and increase their tolerance for diversity by being aware of the preferences of their younger siblings (Howe et al., 2016). On the other hand, children have been shown to develop closed attitudes

by increasing levels of conflict, which has been linked to impeding their openness (Tucker et al., 2019). On the other hand, it has been demonstrated that reasonable degrees of conflict support children's ability to learn more about and think about language, which in turn fosters creative growth (Perlman et al., 2009).

Interpersonal skills are significantly affected by intersibling conflict. An increase in intersibling conflict can inhibit young children's enthusiasm for peer-initiated interactions, which can lead to problems such as socialization disorders. An increase in children's ability for interpersonal will, in turn, reduces sibling conflict. In terms of assertiveness, there is a nonlinear correlation between sibling conflict and assertiveness. Moderate conflict provides children with opportunities for self-advocacy training and increases assertiveness, whereas extreme conflict reduces assertiveness by inhibiting self-expression due to violence or repression (Piotrowski, 2021). Additionally, sibling conflict depletes children's psychological resources, leading them to show less vigor and interest in exploration in social activities (Buist et al., 2017).

# 3.3 Analysis of the Impact of Sibling Rivalry on Socioemotional Competence

Sibling rivalry, which refers to competition between siblings for affection, nurturing attention, or other resources, is a very common family phenomenon (Isaacs, 2016). Different birth order children adopt different sibling rivalry strategies (Sulloway, 1999), which indirectly affects their socioemotional competence. Elderly children often seek parents' approval by acting as surrogate parents for younger siblings, and controlled studies have generally shown that older children are more conscientious, responsible, ambitious, diligent and selfdisciplined than younger children are (Hamilton, 1964; Healey & Ellis, 2007). Sibling rivalry creates uncertainty about children's love for their parents and affects children's emotional stability (Miu et al., 2020). Studies have shown that the cortisol levels of the oldest children are likely to significantly increase during the birth of younger siblings, accompanied by negative emotional responses (e.g., anxious, fearful) (Chen et al., 2016) and even sibling rivalry disorders (Su, 2017), which affect children's resilience to stress. Sibling rivalry can have a positive effect on children's ability to collaborate. For example, competing with siblings requires children to think differently from their parents, determine what their parents expect of them, and behave accordingly, which improves their perspective-taking ability and empathy (Lei, 2023). For younger children, being approachable and easygoing is an important means of attracting parental attention, and they are more agreeable (Sulloway, 1999). Sibling rivalry has a stimulating effect on children's creativity, and younger children are more open and adventurous, attracted to novelty, and more creative, as they are required to explore innovative strategies different from those of their older siblings in sibling rivalry (Sulloway, 1996, 1999). At the level of interpersonal competence, younger children's strategies of sibling rivalry are distinguished from those of their eldest children, who are more outgoing, social, and easier to obtain (Pollet et al., 2010). However, at the same time, children under the sibling rivalry effect may have less interpersonal independence, more dependent behaviors, and a greater tendency to engage in interpersonal interactions with the help of their parents, which is detrimental to the development of children's interaction skills (Lei, 2023). In addition, sibling rivalry and conflict are negatively associated with children's academic self-efficacy (Chen F et al., 2023).

### 3.4 Analysis of the Impact of Sibling Relative Status/Power on Socioemotional Competence

Sibling relative status/power refers to the fact that when siblings face the view of some things or make certain resolutions, one party has more say (Wang, 2014), which is manifested in status differences such as dominating and being dominated, controlling and being controlled (Dong, 2018). There are few current studies on the effects of sibling relative status/power relationships on individual socioemotional competence, and overall, these relationships negatively affect children's socioemotional competence. Abnormal relative status/powers between siblings can cause children to develop irrational self-perceptions and be unable to achieve an objective view of their own strengths and weaknesses and those of their siblings, which also leads to the development of children's self-efficacy, self-perception, recognition of emotions, and correct self-evaluations being adversely affected (Lei, 2023) and may negatively affect emotional stability. Sibling power status inequality creates antagonisms and disputes that adversely affect children's ability to collaborate and open up, reducing their ability to accept openness to diverse ideas, which is detrimental to the development of children's ability to take perspectives, which can impede the development of empathy (Lei, 2023). When children are in the position of suppressing their compatriots for a long time, it is difficult for them to be aware of others' emotions and think about others, and it is more difficult for them to be open and tolerant of differences and conflicts; for the weak party, their words and actions are subjected to the dominating

compatriots for a long time, their ability to express themselves and communicate is limited, and the innovation of their thoughts and behaviors is constrained, which suppresses their creativity (Lei, 2023). In terms of interpersonal skills, higher-status children are more accustomed to unidirectional strategies to address conflicts, such as commands and demands, which affects children's ability to develop an appreciation of diversity, respect for others, and two-way communication (Tezer, 1999). Therefore, in sibling relative status/power relationships, the development of self-concept, social cognition, and interpersonal skills on both sides is not conducive to ensuring that the power position is always enslaved to others or often suppresses others.

# 4. Parenting Strategies to Enhance Socioemotional Competence on the Basis of Sibling Relationships

### 4.1 Improving Sibling Relationship Quality and Promoting Sibling Warmth

At the level of family relationships, some studies support the spillover hypothesis in family systems theory, which states that relational traits in one subsystem of a family diffuse and spread to another subsystem (Lei, 2023). Therefore, children will transfer the observed paradigm of parental interactions to sibling interactions. It is crucial to exert the parental exemplary function, to progressively increase marital satisfaction, and to foster good parent—child relationships.

At the level of family upbringing, parents should emphasize the constructive significance of differential treatment while concurrently avoiding its negative effects. In contrast, fair differential treatment by parents according to the age difference of their children may increase the dimension of intimacy (Feinberg et al., 2003). Parents need to be careful to avoid unjust differential treatment rather than one-size-fits-all parenting and to guide their children to see bright spots in their personalities. Common parenting styles are categorized into four types: democratic, authoritarian, permissive and neglectful. Surveys have shown that parents who adopt a democratic parenting style are more likely to resolve sibling rivalry issues, effectively avoid conflict, and promote positive development of sibling relationships (Bian et al., 2020). The establishment of a "family council" system encourages children to participate in decision-making, which is conducive to the formation of a democratic family atmosphere and strengthens the intimate or warm component of sibling relationships. In addition, fathers are encouraged to be actively involved in the parenting of their firstborn child, especially during the transitional period before and after the birth of the second child, which can be effective in preventing sibling rivalry or conflict by increasing the amount of time they spend with their children and compensating for the mother's limited attentional breadth (Bian et al., 2020).

The different temperament types of each child also affect their adaptability to new-borns and the consequent changes in parental attention and lifestyle. For example, easy children are more adaptable to new things and changes and are less likely to be opposed to the arrival of a younger brother or sister and more likely to develop sibling warmth (Gong, 2024). For difficult children, parents should exercise greater patience and focus on enhancing opportunities for communication and cooperation among siblings. Moreover, they can promote positive interactions among siblings through persuasion, instruction, and encouragement, such as giving advance notice and involving older children in caregiving together.

Finally, Kennedy and Kramer (2008) proposed the More Fun With Sisters and Brothers Program (MFWSB), which is designed for children aged 4--8 in multichild families, to optimize the process of emotion regulation, learn social skills through training programs and collaborative games, and ultimately improve the quality of sibling interactions. The program provides a preventive intervention strategy that has implications for our efforts to strengthen home-school cooperation, develop Chinese and localized training programs, and increase the warmth factor in sibling relationships.

### 4.2 Avoiding High Levels of Sibling Conflict and Correctly Guiding Moderate Conflict

The enhancement of marital satisfaction among parents has been demonstrated to be a pivotal factor in the mitigation of sibling conflict. To prevent elevated levels of conflict, it is recommended that couples reduce hostile behaviors and cultivate emotionally supportive marital relationships through the utilization of marital counselling or communication training. This approach is intended to establish a robust foundation for the sibling relationships of offspring (Brody et al., 2017).

The differential parental treatment of children has been demonstrated to have a detrimental influence on the dynamics of sibling relationships. In terms of resource allocation, a higher level of parental differential treatment has been shown to engender negative emotions such as jealousy and competition among siblings, which in turn gives rise to sibling conflict. Consequently, parents should establish explicit guidelines for the allocation of resources to mitigate any potential negative consequences arising from differential treatment (Shanahan et al., 2008). Moreover, in the context of children's lives and emotional well-being, particularly those with disabilities, it is imperative for parents to provide the necessary special differential treatment to facilitate the development of mature cognition in their children, thereby averting adverse outcomes such as jealousy and conflict.

The impact of parenting styles on the occurrence of conflict between siblings has been a subject of considerable interest in recent academic discourse. Research has indicated that both authoritarian and overprotective parenting styles have the capacity to increase the frequency of conflict between siblings. In two-child families, authoritarian parents' excessive control over the eldest child may lead to hostile behaviors toward the second child, which in turn increases the frequency of conflicts (Sun & Zhang, 2018). Conversely, under spoiled parenting styles, children are more prone to sibling conflicts due to a lack of empathy and self-discipline, which may lead to heated conflicts over trivial matters. Consequently, it is recommended that parents adopt a democratic parenting style, ensuring an appropriate balance between spoiling and strict discipline, as well as setting an appropriate number of rules.

The current study revealed that sibling conflicts of varying intensities differentially impact children's socioemotional competence. Specifically, the results indicated that while moderate conflict yields positive developmental outcomes, high-intensity conflict has detrimental effects. Therefore, parents should implement evidence-based strategies for enhancing the emotional regulation of children, cooperative task design, and empathy training, which may include family emotional education, cooperative task planning, and the development of children's ability to cope with conflict positively (Fang, 2018; Kramer & Gottman, 1992; Yuan et al., 2022).

# 4.3 Building a Healthy Competitive Attitude and Promoting Appropriate Sibling Rivalry

Parents' sense of competitiveness is associated with excessive competitive behavior in their children, and the more parents emphasize the importance of socioeconomic success for their children, the more their children's competitive behavior is stimulated. Scholars have noted that excessive competition is detrimental to the growth of children (Khadjavi & Nicklisch, 2018). Parents need to establish a healthy competitive attitude, encourage their children to develop competitive advantages according to their own characteristics, help them correctly understand when competition is beneficial and when it is not, educate their children to regulate the utilitarian nature of competition, and limit their competitive pressure, which can prevent their children from experiencing excessive competition at an early age and establish a proper attitude toward competition so that they can be more stable to face competitive environments in the future (Liu & Liu, 2008). Some studies have shown that children with wicked sibling rivalry may use lies, snitching, and other methods to avoid responsibility and discredit competing siblings (Khadjavi & Nicklisch, 2018), and parents should know the facts clearly and stop inappropriate competitive tactics in a timely manner when discovering such situations.

# 4.4 Reducing Sibling Relative Status/Power and Fostering Relative Equality Among Compatriots

Sibling power equivalence has a significant effect on individuals' ability to decentralize, enhance perspective taking, and negotiate and cooperate effectively (Xuan, 2005). According to the rule of interpersonal complementarity, dominant behaviors such as oppression and control evoke submissive behaviors in the interpersonal dimension of dominant-dominated behavior (Lorr, 1991). This is also reflected in the parent-child relationship; thus, parents need to change authoritarian parenting styles first to help their children change their vulnerable position in the sibling relative status/power. According to relational theory, sibling relationships are characterized by reciprocity and complementarity, with siblings' age and developmental differences dictating that they take on different family roles and form complementary interactions (e.g., care giving, mentoring, etc.) that may lead to relative status/powers (Howe & Recchia, 2008). Reciprocal interactions emphasize siblings' understanding and companionship with each other, a process that facilitates the resolution of their socioemotional problems, promotes siblings' emotional support to each other, and plays

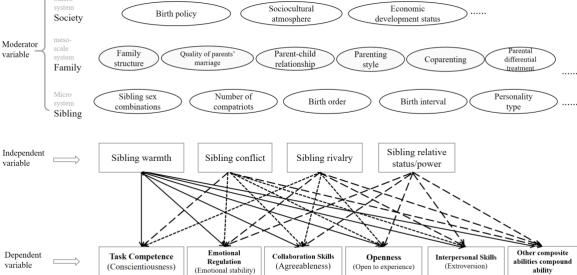
an irreplaceable and positive role in the development of social cognition and interpersonal competence, which are the cornerstones for the establishment of positive sibling relationships (Karos et al., 2007). Therefore, parents need to focus on fostering reciprocal interaction in sibling relationships (e.g., assigning equal roles in games, giving chances for siblings to help each other) to neutralize the conflicts of jealousy and internal imbalance that come with complementary interactions and to develop a relatively equal and dynamically balanced power relationship between siblings.

### 5. Conclusion

This study reveals the differential effects of the four dimensions of sibling relationships (warmth, conflict, competition, and power contrast) on the six-dimensional framework of children's socioemotional competence (task competence, emotion regulation, etc.), and for the first time, it combines the six-dimensional framework of the OECD with sibling relationships to construct a cross-cultural analytical model (see Fig. 2), from which it proposes parenting strategies such as promoting warmth, guiding conflict, optimizing competition, and balancing the power relationship of siblings to provide child families with systematic parenting guidance and facilitate early intervention in socioemotional competence.

Figure 2. Diagram of the analytical model of the effect of sibling relationships on the dimensions of socioemotional competence

| Macro | Socioeultural | Economic | Socioeultural | atmosphere | development status | ......



ps. The solid line represents positive influence, the long-dashed line represents negative influence, and the short-dashed line represents the coexistence of positive and negative influences.

However, there are several limitations in this study. First, the conclusions are mainly based on a literature review and cross-sectional analysis, without longitudinal tracking data to support causal inference. Second, the sample focuses on Chinese families, and the cross-cultural applicability of the conclusions needs to be verified. In the future, the long-term effects of the dynamic evolution of sibling relationships can be explored in depth, and cross-cultural comparative studies can be conducted on the dynamic interactions of socioemotional competence in the context of the current digital era to improve the theoretical models and practical strategies. In summary, this study provides a new perspective for understanding the mechanism of sibling relationships, which is valuable for family education policy making and individual socialization development.

#### References

Adler, A. (1932). What life should mean to you. Little, Brown.

Bian, S. Q., Tian, T., Li, J., Song, J., Zhang, D., Zhang G, X., Shen M, M., Yuan, H., Chen, Y., Zhong F, Y., & Hu Y, F. (2020). Analysis on the influencing factors of sibling relationship among the firstborn children in preschool. *Chinese Journal of Woman and Child Health Research*, (8), 1035–1039.

- Bowlby, J. (1973). Attachment and loss. Random House.
- Brody, G. H., Stoneman, Z., & McCoy, J. K. (2017). Contributions of family relationships and child temperaments to longitudinal variations in sibling relationship quality and sibling relationship styles. In R. Zukauskiene (Ed.), *Interpersonal development* (pp. 449–461). Routledge. https://doi.org/10.4324/9781351153683-27
- Buhrmester, D., & Furman, W. (1990). Perceptions of sibling relationships during middle childhood and adolescence. *Child Development*, *61*(5), 1387–1387. <a href="https://doi.org/10.2307/1130750">https://doi.org/10.2307/1130750</a>
- Buist, K. L., Deković, M., & Prinzie, P. (2013). Sibling relationship quality and psychopathology of children and adolescents: A meta-analysis. *Clinical Psychology Review*, *33*(1), 97–106. <a href="https://doi.org/10.1016/J.CPR.2012.10.007">https://doi.org/10.1016/J.CPR.2012.10.007</a>
- Buist, K. L., Verhoeven, M., Hoksbergen, R., ter Laak, J., Watve, S., & Paranjpe, A. (2017). Associations of perceived sibling and parent-child relationship quality with internalizing and externalizing problems: Comparing Indian and Dutch early adolescents. *Journal of Early Adolescence*, 37(8), 1163–1190. https://doi.org/10.1177/0272431616653473
- Chen, B. B., Wang, Y., Liang, J., & Tong, L. (2016). And baby makes four: Biological and psychological changes and influential factors of firstborn's adjustment to transition to siblinghood. *Advances in Psychological Science*, 24(6), 863–873. <a href="https://doi.org/10.3724/SP.J.1042.2016.00863">https://doi.org/10.3724/SP.J.1042.2016.00863</a>
- Chen F, Y., Cao X, J., & Tang, R. (2023). The influence of authoritarian parenting to academic self-efficacy among primary school students: The mediating role of sibling relationship. *Journal of Mudanjiang Normal University (Social Sciences Edition)*, (4), 85–93. https://doi.org/10.13815/j.cnki.jmtc(pss).2023.04.004
- Chung, M., & Harris, C. R. (2018). Jealousy as a specific emotion: The dynamic functional model. *Emotion Review*, 10(4), 272–287. <a href="https://doi.org/10.1177/1754073918795257">https://doi.org/10.1177/1754073918795257</a>
- Diao J, X., Qing Y, X., & Liao Q, M. (2020). Research on the influencing factors and countermeasures of college students' jealousy. *Theoret Res Pract Innov Entrepr*, *3*(16), 146–149.
- Dong, Y. H. (2018). Neglected family relationships: The influence of sibling relationships on individual psychological and behavioral development. China Social Sciences Press.
- Elias, M. J., Zins, J. E., Weissberg, R. P., Frey, K. S., Greenberg, M. T., Haynes, N. M., & Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators*. CASEL.
- Fang, Y. Y. (2018). A case study on sibling interaction in two-child families [Master's thesis, Nanjing Normal University].
  - $\underline{https://kns.cnki.net/kcms2/article/abstract?v=JtACmXrF2711s4EVx4IpR0QxRHNsZqUaTysrnghQ46KRD9lkBHYQ21AkvLFsm-}$
  - <u>IGdjTKVIbyhSmrgmV7sDNVyR7Dmqq7nn5QZ4HfjKLThdpNJd8fdCyzAa4\_g4\_LMnYXWB20VmfzLwBH9toIKI\_HnbbplAN9Wfi\_EY7u7zqa0UnU7mGb6vRlh3aOrZG8LeH\_OWwwHegKq41M=&uniplatform=NZKPT&language=CHS</u>
- Feinberg, M. E., McHale, S. M., Crouter, A. C., & Cumsille, P. (2003). Sibling differentiation: Sibling and parent relationship trajectories in adolescence. *Child Development*, 74(5), 1261–1274. https://doi.org/10.1111/1467-8624.00606
- Fenwick, J., Gamble, J., Creedy, D., Barclay, L., Buist, A., & Ryding, E. L. (2013). Women's perceptions of emotional support following childbirth: A qualitative investigation. *Midwifery*, 29(3), 217–224. <a href="https://doi.org/10.1016/J.MIDW.2011.12.008">https://doi.org/10.1016/J.MIDW.2011.12.008</a>
- Furman, W., & Buhrmester, D. (1985). Children's perceptions of the qualities of sibling relationships. *Child Development*, 56(2), 448–461. <a href="https://doi.org/10.2307/1129733">https://doi.org/10.2307/1129733</a>
- Gong, Y. (2024). A study of the effect of quality of sibling relationships on pro-social behavior among young children in families [Master's thesis, Tarim University]. CNKI. <a href="https://link.cnki.net/doi/10.27708/d.cnki.gtlmd.2024.000101">https://link.cnki.net/doi/10.27708/d.cnki.gtlmd.2024.000101</a>

- Hakvoort, E. M., Bos, H. M. W., Van Balen, F., & Hermanns, J. M. A. (2010). Family relationships and the psychosocial adjustment of school-aged children in intact families. *Journal of Genetic Psychology*, 171(2), 182–201. https://doi.org/10.1080/00221321003657445
- Hamilton, W. D. (1964). The genetical evolution of social behaviour. II. *Journal of Theoretical Biology*, 7(1), 17–52. <a href="https://doi.org/10.1016/0022-5193(64)90039-6">https://doi.org/10.1016/0022-5193(64)90039-6</a>
- Hansla, A., Gamble, A., Juliusson, A., & Gärling, T. (2008). The relationships between awareness of consequences, environmental concern, and value orientations. *Journal of Environmental Psychology*, 28(1), 1–9. <a href="https://doi.org/10.1016/J.JENVP.2007.08.004">https://doi.org/10.1016/J.JENVP.2007.08.004</a>
- Healey, M. D., & Ellis, B. J. (2007). Birth order, conscientiousness, and openness to experience. Tests of the family-niche model of personality using a within-family methodology. *Evolution and Human Behavior*, 28(1), 55–59. https://doi.org/10.1016/J.EVOLHUMBEHAV.2006.05.003
- Howe, N., Porta, S. D., Recchia, H., & Ross, H. (2016). "Because if you don't put the top on, it will spill": A longitudinal study of sibling teaching in early childhood. *Developmental Psychology*, *52*(11), 1832–1842. <a href="https://doi.org/10.1037/DEV0000193">https://doi.org/10.1037/DEV0000193</a>
- Howe, N., & Recchia, H. E. (2008). Siblings and sibling rivalry. *Encyclopedia of Infant and Early Childhood Development, Three-Volume Set, 3,* 154–164. <a href="https://doi.org/10.1016/B978-012370877-9.00145-6">https://doi.org/10.1016/B978-012370877-9.00145-6</a>
- Huang H, J., Liu S, Y., Zhou Y, Q., & Xu L, X. (2024). Birth order effect on social-emotional competence in young children: Mediating effect of mothers' parenting sense of competence. *Department of Psychology*, (3), 30–35. https://doi.org/10.13837/j.issn.1006-8309.2024.03.0006
- Isaacs, D. (2016). Sibling rivalry. *Journal of Paediatrics and Child Health*, 52(11), 977–978. https://doi.org/10.1111/JPC.13385
- Karos, L. K., Howe, N., & Aquan-Assee, J. (2007). Reciprocal and complementary sibling interactions, relationship quality and socio-emotional problem solving. *Infant and Child Development*, *16*(6), 577–596. https://doi.org/10.1002/ICD.492
- Kennedy, D. E., & Kramer, L. (2008). Improving emotion regulation and sibling relationship quality: The more fun with sisters and brothers program. *Family Relations*, *57*(5), 567–578. https://doi.org/10.1111/J.1741-3729.2008.00523.X
- Khadjavi, M., & Nicklisch, A. (2018). Parents' ambitions and children's competitiveness. *Journal of Economic Psychology*, 67, 87–102. <a href="https://doi.org/10.1016/J.JOEP.2018.05.004">https://doi.org/10.1016/J.JOEP.2018.05.004</a>
- King, L., Jolicoeur-Martineau, A., Laplante, D. P., Szekely, E., Levitan, R., & Wazana, A. (2021). Measuring resilience in children: A review of recent literature and recommendations for future research. *Current Opinion in Psychiatry*, 34(1), 10–21. https://doi.org/10.1097/YCO.00000000000000663
- Kramer, L., & Gottman, J. M. (1992). Becoming a sibling: "With a little help from my friends". *Developmental Psychology*, 28(4), 685–699. https://doi.org/10.1037/0012-1649.28.4.685
- Kramer, L., & Ramsburg, D. (2002). Advice given to parents on welcoming a second child: A critical review. *Family Relations*, 51(1), 2–14. https://doi.org/10.1111/J.1741-3729.2002.00002.X
- Lam, C. B., Solmeyer, A. R., & McHale, S. M. (2012). Sibling relationships and empathy across the transition to adolescence. *Journal of Youth and Adolescence*, 41(12), 1657–1670. <a href="https://doi.org/10.1007/S10964-012-9781-8">https://doi.org/10.1007/S10964-012-9781-8</a>
- Lei, Y. (2023). Study on the influence of "multi-child" family relationship on the social emotional ability of primary school students [Master's thesis, Zhejiang Normal University]. CNKI. https://link.cnki.net/doi/10.27464/d.cnki.gzsfu.2023.000287
- Liu, H. (2020). A study on the relationship between the sibling relationship of middle school students and the social perspective taking [Master's thesis, Hebei Normal University]. CNKI. <a href="https://link.cnki.net/doi/10.27110/d.cnki.ghsfu.2020.000372">https://link.cnki.net/doi/10.27110/d.cnki.ghsfu.2020.000372</a>

- Liu, J. W., & Liu, A. S. (2008). The relationship between competition attitude and big five personality of undergraduates. *China Journal of Health Psychology*, (4), 382–385. https://doi.org/10.13342/j.cnki.cjhp.2008.04.051
- Lorr, M. (1991). A redefinition of dominance. *Personality and Individual Differences*, 12(9), 877–879. https://doi.org/10.1016/0191-8869(91)90175-B
- Miu, H. J., Huang, F., & Lin, M. (2020). The effect of psychoanalysis and psychological intervention on the treatment of sibling rivalry disorder. *Fujian Medical Journal*, (6), 113–115.
- Perlman, M., Ross, H. S., & Garfinkel, D. A. (2009). Consistent patterns of interaction in young children's conflicts with their siblings. *International Journal of Behavioral Development*, 33(6), 504–515. https://doi.org/10.1177/0165025409343745
- Piotrowski, J. T. (2021). Sibling conflict and emotional adjustment: A longitudinal investigation. *Journal of Child and Family Studies*, 30(5), 1234–1245.
- Pollet, T. V., Dijkstra, P., Barelds, D. P. H., & Buunk, A. P. (2010). Birth order and the dominance aspect of extraversion: Are firstborns more extraverted, in the sense of being dominant, than laterborns? *Journal of Research in Personality*, 44(6), 742–745. https://doi.org/10.1016/J.JRP.2010.10.002
- Qian, G., Li, R., Yang, W., Li, R., Tian, L., & Dou, G. (2021). Sibling jealousy and temperament: the mediating effect of emotion regulation in China during COVID-19 pandemic. Frontiers in Psychiatry, 12, 729883.
- Recchia, H. E., & Howe, N. (2009). Sibling relationship quality moderates the associations between parental interventions and siblings' independent conflict strategies and outcomes. *Journal of Family Psychology*, 23(4), 551–561. https://doi.org/10.1037/A0014980
- Shanahan, L., McHale, S. M., Crouter, A. C., & Osgood, D. W. (2008). Linkages between parents' differential treatment, youth depressive symptoms, and sibling relationships. *Journal of Marriage and Family*, 70(2), 480–494. https://doi.org/10.1111/J.1741-3737.2008.00495.X
- Su, L. Y. (2017). Diagnosis, treatment and prevention of sibling rivalry disorder. *Chinese Journal of Child Health Care*, (3), 221–222+226.
- Sulloway, F. J. (1996). Born to rebel: Birth order, family dynamics, and creative lives. Vintage.
- Sulloway, F. J. (1999). Birth order. In M. Runco & S. R. Pritzker (Eds.), *Encyclopedia of creativity* (pp. 189–202). Elsevier Science.
- Sun, L. H., & Zhang, A. R. (2018). An investigation into the sibling relationship under different family upbringing styles. *Journal of Shanghai Educational Research*, (8), 59–63. https://doi.org/10.16194/j.cnki.31-1059/g4.2018.08.014
- Teti, D. M., & Ablard, K. E. (1989). Security of attachment and infant-sibling relationships: A laboratory study. *Child Development*, 60(6), 1519–1528. <a href="https://doi.org/10.2307/1130940">https://doi.org/10.2307/1130940</a>
- Tezer, E. (1999). The functionality of conflict behaviors and the popularity of those who engage in them. *Adolescence*, 34(134), 409–415.
- Tucker, C. J., Finkelhor, D., & Turner, H. (2019). Patterns of sibling victimization as predictors of peer victimization in childhood and adolescence. *Journal of Family Violence*, *34*(8), 745–755. <a href="https://doi.org/10.1007/S10896-018-0021-1">https://doi.org/10.1007/S10896-018-0021-1</a>
- Wang, W. T. (2014). Relationship between sibling relationship and aloneness of senior high school students: The mediating role of peer relationship [Master's thesis, Ludong University]. CNKI. <a href="https://kns.cnki.net/kcms2/article/abstract?v=JtACmXrF271rjMxt\_QZt3RGGOi\_pycFTcr\_xhdxd6Mvx4GU99sf-">https://kns.cnki.net/kcms2/article/abstract?v=JtACmXrF271rjMxt\_QZt3RGGOi\_pycFTcr\_xhdxd6Mvx4GU99sf-</a>
  - $\label{thm:collinear} $\frac{\text{5tMTES} \text{c9Lqhe9JI5D4tJUJT6zryYJca3OO5tSSrBeQyVTnkZkN0GaGgEf1c0PV0HzAw8ZclE9oGXeeV} \\ \text{wm} \text{RuRkr6u3WynV4cb8EEu} \text{3NYMk8v6P} \text{vfmTyaKI85vwntth82uwNbuLKiWBtJQAXTuvdo} \\ = &\frac{\text{sumple form} \text{NZKPT\&language} \text{CHS}}{\text{sumple form} \text{NZKPT\&language} \text{CHS}} \\ \text{sumple form} &\frac{\text{sumple form} \text{NZKPT\&language} \text{CHS}}{\text{sumple form} \text{NZKPT\&language} \text{CHS}} \\ \text{sumple form} &\frac{\text{sumple form} \text{NZKPT\&language} \text{CHS}}{\text{sumple form} \text{NZKPT\&language} \text{CHS}} \\ \text{sumple form} &\frac{\text{sumple form} \text{NZKPT\&language} \text{CHS}}{\text{sumple form} \text{NZKPT\&language} \text{CHS}} \\ \text{sumple form} &\frac{\text{sumple form} \text{NZKPT\&language} \text{CHS}}{\text{sumple form} \text{NZKPT\&language} \text{CHS}} \\ \text{sumple form} &\frac{\text{sumple form} \text{NZKPT\&language} \text{CHS}}{\text{sumple form} \text{NZKPT\&language} \text{CHS}} \\ \text{sumple form} &\frac{\text{sumple form} \text{NZKPT\&language} \text{CHS}}{\text{sumple form} \text{NZKPT\&language} \text{CHS}} \\ \text{sumple form} &\frac{\text{sumple form} \text{NZKPT\&language} \text{CHS}}{\text{sumple form} \text{NZKPT\&language} \text{CHS}} \\ \text{sumple form} &\frac{\text{sumple form} \text{NZKPT\&language} \text{NZKPT\&language}$

- Wang, X. L. (2021). The number of children, academic achievement and the shadow education acquisition of junior high school students-an empirical study of education tracking survey from China. *Journal of Chinese Youth Social Science*, (3), 97–105. https://doi.org/10.16034/j.cnki.10-1318/c.2021.03.012
- Xu, L., Chen, S. H., Jin, X. Z., & Tian, P. P. (2020). Firstborn children's peer communication ability and its impact on sibling relationship in two-child family. *Early Childhood Education (Educational Sciences)*, (9), 52–56.
- Xuan, H. P. (2005). The conflict handling resolution of junior high school students and the related factors research [Master's thesis, Shanghai Normal University]. CNKI. <a href="https://kns.cnki.net/kcms2/article/abstract?v=JtACmXrF271Ld8mzqFY14vcSWjTrAJ5C1U6RWCrCgNJfI7TUHIs5gMVy9XrlrcTFukD2lNW2N5jbLltKac1LUAmh8PTpur59BzXHax9dAdNCsTLaD1Rmm58xYgXTaxnGYXglA2axU1iW6ypKecrqzf7VRdoxnUf0ju4it3hW-6jhphlyEln-DEyjXw7rEVzg&uniplatform=NZKPT&language=CHS</a>
- Yan, M. R. (2022). The relationship between sibling relationship and prosocial behavior: The intermediary role of emotional regulation and peer relationship and its educational implications [Master's thesis, Henan University]. CNKI. <a href="https://link.cnki.net/doi/10.27114/d.cnki.ghnau.2022.001908">https://link.cnki.net/doi/10.27114/d.cnki.ghnau.2022.001908</a>
- Yuan, Z. F., Li, W. J., Li, Z. H., Song, S. C., Xie, R. B., & Ding, W. (2022). The association between family function and prosocial behavior of left-behind children: The mediating role of empathy. *Chinese Journal of Applied Psychology*, (6), 500–507.
- Zhang, H. C. (2022). The characteristics and influencing factors of the social and emotional competence of the firstborns in the two-child families [Master's thesis, Inner Mongolia Normal University]. CNKI. https://link.cnki.net/doi/10.27230/d.cnki.gnmsu.2022.000268
- Zhao, F., & Yu, G. (2017). Sibling relationship and its relation with children and adolescents' social development. *Advances in Psychological Science*, 25(5), 825–825. <a href="https://doi.org/10.3724/SP.J.1042.2017.00825">https://doi.org/10.3724/SP.J.1042.2017.00825</a>

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### **Conflicts of Interest**

The authors declare no conflict of interest.

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