

The influence of the number of siblings in a family on undergraduate students' peer interaction ability

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Abstract. This study examines the effects of the number of children in a family on the peer interaction ability of college students, and analyzes the differences in social skills and their psychological mechanisms between only children and non-only children, taking into account the background of China's fertility policy changes. The main research methods used in the study are literature analysis and comparative research methods. This study explored the influence of family structure on college students' peer interaction competence through literature analysis, filling a gap in the field of educational psychology for the college student population and explaining the causes of differences with the help of social psychological theories. The study focuses on the combined effects of family structure, cultural background, and parenting styles on social competence, pointing out that this topic can be further explored in depth through empirical research in the future.

1. Introduction

Under the influence of the birth policy, the difference between one-child and non-one-child families has become a common social phenomenon. The importance of the family environment to individual mental health is self-evident, while the college student group is at a special stage of complex interpersonal environment, and their mental health problems are of great concern. It follows that specific conditions must be taken into account when assessing peer interaction competence. The college years, a critical transition from adolescence to adulthood, are crucial for the development of social skills influenced by psychological adjustment. Differences in family structure to changes in psychological adjustment, which affects the strengths and weaknesses of peer interaction skills among college students. Therefore, based on the differences between only-child and non-only-child families, this study compares and analyzes the phenomenal differences in college students' peer interaction skills, explores their psychological health and proposes ideas for solutions.

This study belongs to the field of educational psychology and specifically explores the influence of family structure on college student's mental health and social skills. This study

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fills a gap in related research by examining the impact of the number of children in a family on the social skills of college students, providing a detailed analysis of how family structure affects peer interaction skills, and offering guidance for improving college students' interpersonal skills and promoting personal growth. The main research question of this paper is: how does the number of children in a family structure affect the peer interaction skills of college students? The study used a combination of literature analysis and comparative analysis to explore these differences and their impact on mental health.

This study contributes to the field of research by providing an analysis of the impact of family child structure on the social skills of college students. It provides educational psychology with research on the mental health and interpersonal, developmental skills of students from different family backgrounds as a way to develop more rational education for the subsequent period.

To summarize, this study aims to investigate the influence of family structure on college students' peer interaction skills. By comparing one-child and multiple-child families, the study examines the differences and provides insights into the development of healthier relationships and overall well-being.

2. Literature Review

Based on the social context of China's national conditions and economic development, there is a unique background for the growth of the only-child group in China. A large number of studies have examined whether only children differ significantly from non-only children in various developmental indicators [1-4]. In most of the past studies, it can be concluded that only children are slightly better than non-only children in terms of cognition, academics, and access to education [5-7], but there is no significant difference between the only and non-only groups in terms of social competence in non-cognitive dimensions (emotion regulation, stress tolerance, and willingness to cooperate, etc.), especially when it comes to peer relationships or other general social interactions. Whether there are significant differences in the social competence of the only-child group is still highly controversial [2,8]. These differences may be caused by differences in research methods, sample limitations, or differences in cultural backgrounds. The results of two surveys of middle school students conducted by Feng Xiaotian in 1996 and 1998, respectively, showed that only-child adolescents were better at social interactions than non-only-child adolescents of the same age. In particular, the results of statistical tests show that the proportion of only children in secondary school who make new friends quickly in new environments is higher than that of non-only children, their ability to socialize with others is better than that of non-only children, the number of good friends is significantly higher than that of non-only children, and their sense of loneliness is significantly lower than that of non-only children [9]. Thus, the socialization ability is closely related to the differences in their family structure. Research has shown that the quality of parental involvement directly affects the social skills of only children. Optimal parenting skills lead to better socialization, although some findings suggest that higher social skills may exist even when parents vary in ability [10]. Compared to non-only children, only children exhibit better pro-social behaviors such as altruism and cooperativeness, especially in structured environments such as play and group activities [11]. In contrast, sibling relationships in families, as horizontal relationships, can provide emotional support and serve as a model for peer interactions, counteracting the rigidity of vertical relationships [12]. Positive sibling interactions can mitigate the negative psychological effects of strict vertical hierarchies and enhance resilience and social skills [12]. From the literature reviewed, it can be obtained that only children are superior to non-only children in dealing with vertical relationships, such as parent-child relationships, as well as having superior pro-social

behaviors. Non-only children tend to perform better in resilience and conflict resolution due to the balance of sibling relationships. This research can be explained and generalized through the theory of “compensation and extension of social interaction” (psychological compensation). (Psychological compensation refers to behaviors that diminish or even counteract perceived self-discrepancy by increasing the amount of time and energy invested in the perceived self-discrepancy or by shifting to alternative skills.) Feng Xiaotian's research shows that there is a lot of interaction and contact between siblings in non-only-child families, and in only-child families, this relationship is often replaced by interaction and contact between children and parents. This objectively leads to more frequent interactions and interactions between parents and children in one-child families, and a closer relationship between parents and children. It is in this process of communication and interaction that the differences between the two generations in terms of psychology, thought and behavior are narrowed, the generation gap is narrowed. On the other hand, although treat their parents as “peer partners”, their status in the process of interaction is not completely equal, and their parents are always in the position of guides, leaders, dominants or “superiors”. This pattern of interaction may reinforce adaptive strategies, such as authority compliance or negotiation skills, in asymmetric power relationships (e.g., teacher-student, superior-subordinate, etc.) for only children. The social learning theory can be used to explain the social competence of non-only children. (Social learning theory was developed by the American psychologist Albert Bandura in 1952. It is mostly used to observe the role of learning and self-regulation in influencing human behavior. Bandura explores the effects of the interaction of an individual's cognitive, behavioral and environmental factors on human behavior.) In non-only families, sibling relationships provide an early social learning environment for non-only children, which in turn influences the social competence of non-only children.

3. Results and Discussion

3.1 Only children outperform non-only children in certain social skill

Only children are more adept at adapting to and dealing with power asymmetries, such as teacher-student and parent-child relationships, and also have stronger social skills. Only-child families have a higher frequency of parent-child interactions than families with many children, and only children participate more frequently in extracurricular activities [13]. Related research suggests that only children may engage in more cooperative behaviors in structured environments (e.g., games) than non-only children [11]. This shows that only children are more willing to participate in social activities and are able to initiate cooperation with their peers. According to research, only children tend to show stronger pro-social tendencies, especially in altruistic and interpersonal behaviors. Only children make new friends faster in unfamiliar environments and have stronger social extensibility. In social activities, only children show less selfishness and more willingness to sympathize and help others than non-only children [14]. Thus, compared with non-only children, only children tend to show higher pro-social behavior, are friendlier and easier to adapt to new environments, and are able to take the initiative in social activities. At the same time, only children are more adaptive in dealing with unequal power relationships, such as vertical relationships with teachers and elders, and are able to maintain with their elders.

3.2 Advantages of Children from Multi-Child Families in Teamwork and Conflict Resolution

As a result of growing up communicating and interacting with their siblings, they are better at teamwork and conflict coordination. As the primary place of individual socialization, the interaction pattern among family members has a fundamental impact on the development of social ability. For Children from multi-child families, daily interactions with siblings constitute a persistent and natural social training ground.

Therefore, Children from multi-child families in the family need to live with their siblings for a long time during their growth, which makes them face social situations with others earlier, for example, they need to complete housework together, share toys, and negotiate recreational time in life, which can enable children in multi-child families to learn cooperation and division of labor, and be more adaptable to team cooperation in the future. Children who successfully navigate conflicts tend to become more socially adept, leading to increased popularity and interaction with peers [15]. Sibling conflicts, such as competition for resources, such as material resources and parental attention, are characterized by high frequency and low risk and provide a good breeding ground for the development of social skills. Force them to learn conflict management and negotiation skills. In long-term interaction, children in multi-child families can learn long-term strategies, form a family harmonious model, and make their social performance more inclusive. Not only that, in terms of emotional expression, due to the frequent interaction with brothers and sisters, observing and responding to the emotions of brothers and sisters, can enhance the ability to understand emotions, which can better understand the feelings of others in the team, thus helping to solve the friction in social places. In the face of sibling aggression or negative emotions, non-only children are forced to practice emotional management. For example, the experience of older children in families who often have to restrain their own negative emotions to appease their younger siblings enhances their emotional stability in stressful group situations.

Although these advantages depend on certain conditions, such as parental non-interference, these findings suggest that sibling interaction can provide a real and emotionally engaged social scene, enabling non-only children to accumulate a great deal of experience in cooperation and conflict management before entering formal social environments such as school. This advantage may be particularly evident in scenarios where you need to quickly adapt to a new team.

3.3 Parenting Style Effects on Social Competence in Only Children and Non-Only Children

Family parenting styles (e.g., level of parental education, parent-child interaction patterns) have a more significant effect on social competence than the number of children.

Studies have shown that interventions in parenting styles affect the social competence of only children versus non-only children. Authoritative parents who can serve as good role models for their children to solve problems on their own in a multi-child family and who also provide bottom-line norms can maximize the development of positive interactions among their children. On the other hand, in authoritarian parenting, parents who forcefully suppress conflict may deprive their children of the opportunity to negotiate on their own, which in turn may lead to higher social anxiety and defensiveness among non-only children in an unfamiliar group. Chronic hostile sibling relationships may lead to limited development of social skills and an inability to have benign social experiences, whereas harmonious relationships are more likely to promote cooperative skills and greater mental regulation.

Despite the lack of sibling interaction, an only child's social skills can be developed in other ways. Parents of single children can provide focused emotional and educational support, fostering a strong parent-child bond [16], thus making only children more prepared to face social places. Meanwhile, only children are able to make up for the missing horizontal interactions in the family in terms of social environments, such as active participation in teamwork in group activities such as school and hobby classes, as well as the acquisition of peer interaction skills. In a particular culture, ours, which emphasizes collectivism, only children may be encouraged to participate in group activities at an earlier age, thus narrowing the differences with non-only children

Although non-only children may have an early experience advantage in teamwork and conflict resolution due to sibling interaction, this advantage is not absolute. Only children can reach the same level through other means, and individual differences and the influence of family environment may be more decisive than the fact of being an only child itself.

4. The interpretation of the research

Social psychological theories, such as social interaction compensation theory and social learning theory, on the contrary, the only child in the interaction with their parents to learn more, get more exercise, and more capable. It is because the only child college students in the social interaction in this aspect of learning more, more capable, so they will be more active in the dormitory, the classroom collective social relations to expand. Multi-child families provide a platform for early social learning for non-only children, and non-only children acquire conflict resolution skills through sibling interactions in advance. The influence of cultural context on family structure can also have an impact on the results of the study. Differences in cultural norms and values determine differences in parenting practices, family interactions, and resource allocation, resulting in diverse family structures across societies. The key values of Confucian culture, which include ethics and morality, the commonwealth of mankind, and the five primary relationships that define identity, duty and responsibility, have shaped traditional Chinese family dynamics and fostered a family structure oriented towards collectivism and filial piety [17]. Cultural traditions dictate family roles, rituals, and responsibilities that influence how family members interact and support each other [18]. In Canada, diverse family structures, including single-parent and same-sex families, suggest that emotional support and economic stability are critical to children's social development, regardless of family type [19]. It should not be overlooked that although cultural differences influence family structure, the globalization of the modern economy is leading to a dynamic shift in traditional family roles, and cross-cultural differences in family practices may be diminishing.

5. Limitations of the study

Although the existing literature analysis provides a valuable theoretical framework for understanding the differences between non-only children and only children in peer interaction skills, this study still has some limitations, mainly in terms of data limitations and the singularity of the research methodology. In terms of research methodology, this study is mainly based on a literature review and lacks the support of primary empirical data (e.g., questionnaires, behavioral experiments, or longitudinal tracking data), thus making it difficult to quantify the extent to which different factors (e.g., family upbringing styles, the age difference of siblings) have a specific impact on social competence.

Based on these limitations, future research can be analyzed in depth in the following directions. First, quantitative research methods, such as questionnaires, interviews or

conducting situational analyses, can be combined to directly compare the behavioral differences between only and non-only children, and further research can be conducted with more consideration of the mediating role of variables such as family interactions and personality traits. Second, cross-cultural comparative studies should be conducted, especially focusing on the effects of differences in family structure across geographic and cultural backgrounds on the development of social skills. For example, tracking analysis after the implementation of China's birth policy can provide natural experimental conditions for inferring the social competence of only-children and non-only-children.

6. Conclusion

This study explored the effect of the number of children in the family on college students' peer interaction skills through a literature analysis and found that only children performed better in adapting to power asymmetry relationships, while non-only children were better at teamwork and conflict resolution. Only children are better at dealing with vertical relationships, such as teacher-student and parent-child relationships, than non-only children. Multiple-child families, on the other hand, may acquire conflict resolution skills more early through sibling interactions. According to the theory of "compensation and extension of social interactions", in one-child families, sibling interactions are often replaced by interactions between children and parents. This shortcoming makes the parent-child relationship closer in only-child families and reinforces the adaptive strategies of only-children in power asymmetry relationships (e.g., teacher-student, superior-subordinate). This study emphasizes the combined effects of family environment, cultural background, and parenting styles on social competence, pointing out that this topic can be further explored in depth in the future in conjunction with empirical research. By analyzing the effects of the number of children in the family on the social competence of college students, this study provides educational psychology with a study of the interpersonal competence of students from different family backgrounds. The results of the study can provide theoretical support for mental health education and social competence development in colleges and universities, as well as insights into family education and the development of social policies.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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