

Exploring the Dynamics of Preschoolers' Peer Interaction Skills in China

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Abstract: *The age of 3-6 is a critical period for human social development, and children's peer interaction skills are the main content of development in the social field. Research on peer interaction ability in recent years has found that although teachers and parents pay more and more attention to the interaction between young children and their peers, many areas cannot yet evaluate it scientifically. Therefore, research on children's peer interaction skills is very important and necessary. This study used the Peer Interaction Skills Questionnaire for 3-6 Year Old Children (Teacher Evaluation) (Li, 2008) to evaluate the peer interaction skills of 166 children aged 3-6 in Nanning City, Guangxi Zhuang Autonomous Region. Understand the peer interaction skills of children aged 3-6 from four dimensions: social initiative behavior, language and non-language behavior, prosocial behavior and social barriers. The current situation was investigated and the results showed that: (1) The overall development of peer interaction skills of children aged 3-6 years is positive, but there is an imbalance in development. Children aged 5-6 have better peer interaction skills than others. In particular, there were significant age differences in prosocial behavior and social barriers, (2) In terms of kindergarten types, there are significant differences between public kindergartens and private kindergartens. And in terms of social initiative behavior and social barriers, private kindergartens are better than public kindergartens.*

Keywords: Peer Interaction, Social Communication Development, Preschoolers, Gender

1. Introduction

Peer interaction refers to a child's ability to engage meaningfully with peers in social situations and is widely regarded as a critical component of social competence (Wentzel, 2009; Ji, 2024). This ability is multifaceted, structured, and measurable, encompassing skills such as sharing, cooperation, conflict resolution, and perspective-taking. These skills do not develop in isolation but are shaped through daily experiences and interactions within natural social settings, especially in early childhood. According to a landmark study by Cowen et al. (1973), difficulties in early peer relationships may be linked to later maladjustment during adolescence and early adulthood (Shin et al., 2016). This suggests that early peer dynamics may serve as a developmental foundation for later social adjustment. Building on this, recent findings suggest that limited development in peer interaction skills can impact children across multiple domains, including education, emotional well-being, and future workplace functioning (LoParo et al.,

2023). As such, promoting healthy peer interactions in early years is increasingly seen as a valuable preventive and developmental strategy to promote healthy development.

In the context of China's rapid socioeconomic changes and evolving family structures, the nature of peer interactions among preschool children has also shifted. The growing prevalence of nuclear families, dual-income households, and reduced sibling interactions has altered the typical settings where children learn and practice peer-related social skills. These changes have introduced new dynamics and challenges that influence how children develop social skills and navigate peer relationships (Chen, 2024; Xing, 2024). Additionally, the increased use of digital devices and structured academic programs in early childhood education may limit children's opportunities for spontaneous, peer-led play, which is vital for developing interaction skills (Disney & Geng, 2022; Clemente-Suárez et al., 2024). Consequently, peer interaction is not only tied to social functioning but also plays a role in children's emotional regulation, self-perception, and their capacity to form and maintain relationships over time (Yu, 2024; Zhang, 2021). These influences underscore the importance of creating supportive environments—both at home and in educational settings—that actively promote positive peer engagement and relationship-building opportunities.

2. Literature Review

Peer interaction is a fundamental component of children's social competence and plays a crucial role in shaping their interpersonal and developmental outcomes. Social competence with peers encompasses a range of abilities, including verbal and nonverbal communication, conflict resolution, cooperation, and the ability to initiate and sustain interactions. Howes (1987) posits that peer interaction skills in early childhood serve as indicators of children's capacity to engage successfully with peers, influencing their popularity, social influence, and communicative sensitivity. Supporting this, Roper and Hinder (1978) emphasize that effective communication behavior is foundational to successful peer engagement. In the Chinese context, Zhang Yuan (2002) conceptualizes peer interaction ability through four dimensions: social initiative, verbal and nonverbal communication, social barriers, and prosocial behavior. These dimensions collectively reflect a child's capacity for coordinated interpersonal communication. Building upon this framework, Li Yanju (2008) further describes peer interaction ability as the capability to manage and sustain relationships with similarly aged peers throughout the communication process.

The importance of peer interaction in early childhood is widely recognized, with research highlighting its impact across three key areas: social, psychological, and cognitive development. First, peer interaction supports social development by helping children build key skills such as cooperation, turn-taking, and emotional expression. Groh et al. (2014) found that strong peer interaction contributes to both social and cognitive growth, while Ning Yafei (2018) noted that poor peer skills can lower children's quality of social life. These findings underscore the importance of early peer relationships in developing communication and social competence. Second, peer interaction contributes to psychological development, promoting emotional well-being and resilience. Hartup (1983) reported that limited peer engagement in early childhood may lead to later psychological difficulties. Deng Ciping (1999) emphasized its role in developing Theory of Mind, while Li Zhixue (2019) found that peer acceptance is linked to better emotional regulation and problem-solving. Rubin et al. (2015) also noted that positive peer experiences reduce the risk of psychological problems.

Third, peer interaction also plays a vital role in cognitive development. Young children often learn by observing and imitating those around them, with peers serving as important models for learning (Meltzoff & Marshall, 2018; Over, 2020). In educational settings, frequent peer engagement exposes children to a variety of perspectives and problem-solving approaches, enriching their thinking processes (Carr, 2015; Wang et al., 2015). Piaget (1952), as well as Howe and Mercer (2007), emphasized that collaboration with peers promotes cognitive growth through active participation and social negotiation. Similarly, Fu Minghong (1992) and Kory-Westlund and Breazeal (2019) found that meaningful peer interactions can boost children's motivation and support deeper knowledge acquisition.

Given the importance of peer interaction in early development, there is a need for research that examines how these skills are acquired and expressed in preschoolers. While past studies highlight the benefits of peer relationships, less is known about how specific skills vary across different contexts. In particular, school type may influence how children interact with peers, yet these factors remain understudied. This study addresses these gaps by investigating key peer interaction skills among preschool children and exploring how they differ based on the type of school, providing insights to guide early education and intervention efforts.

3. Purpose of Study

The purpose of this study is to understand the dynamic development of peer interaction skills among a sample of children aged 3-6 years old in China. The research questions to be addressed in this study are as follows:

- 1) What is the developmental level of peer interaction ability among 3-6-year-old preschoolers in China, as reported by their teachers?
- 2) Does the type of preschool (public or private) influence their peer interaction skills?

4. Methodology

Research Design

This study uses a quantitative online survey method to explore the development of peer interaction skills among 3-6-year-old preschoolers in China. Compared with traditional survey methods, online surveys have unique advantages such as strong timeliness, wide survey scope, low survey cost, small human error, and simple statistical analysis (Li, 2011). The online questionnaire was distributed through the online survey platform Sojump. The researcher directly distributed the questionnaire to the teachers of the selected kindergartens, and the teachers filled in the online questionnaire by clicking the link or scanning the QR code. The questionnaire was closed one week after it was distributed, and a total of 166 responses received.

Sample and Sampling Method of the Study

A cluster sampling method was used to select a total of 166 preschoolers and 15 teachers from 2 kindergartens in Nanning City, Guangxi Zhuang Autonomous Region. Among them, one public kindergarten and one private kindergarten.

Instruments of the Study

On the basis of Zhang Yuan's (2002) revised 'Peer Interaction Skills Scale for 4-6 Year Old Children' and Li Yanju's (2008) 'Peer Interaction Skills Questionnaire for 3-6 Year Old Children (Teacher Evaluation)', combined with the goals and actual situation of this study, the researcher has developed the 'Peer Interaction Skills Scale'. This scale is mainly used by

teachers to rate children in their class. It has a total of 20 questions, divided into four aspects: social initiative, social barriers, prosocial behavior, language and non-language behavior, and 5 questions for each dimension (As shown at Table 1.). Social initiative includes item 1, item 5, item 13, item 15, and item 17. Social barriers include item 4, item 8, item 12, item 18, and item 20. Prosocial behavior includes item 2, item 6, item 10, item 14, and item 16. Language and non-language behavior include item 3, item 7, item 9, item 11, and item 19.

The scale adopts a five-point scale, with 5 being “always”, 4 being “usually”, 3 being “generally”, 2 being “rarely” and 1 being “never”. Among them, 8 items, 4, 8, 9, 10, 12, 16, 18, and 20, are reverse scoring, and the remaining items are positive scoring. After reverse scoring, the higher the scores in the three dimensions of social initiative, prosocial behavior, and verbal and non-verbal communication, the stronger the child's development in the corresponding aspects, while the higher the scores in child's social barriers, the fewer social barriers the child is facing.

Table 1: Peer Interaction Skills Scale

Items	Always	Usually	Generally	Rarely	Never
1. Good at standing up for the weak					
2. Willing to help others					
3. Able to introduce oneself to others completely and clearly					
4. Often stay alone in a group					
5. Can take the initiative to start games and become a leader					
6. Care about other children and feel sympathy for others' unfavorable situations (such as illness or disability)					
7. Smile at peers					
8. Often ignored by peers					
9. Get nervous when entering an unfamiliar class					
10. Refuse to share their toys with other children					
11. Take the initiative to greet other children with polite words					
12. When other children are playing, she/he is just a bystander					
13. Get familiar with unfamiliar children quickly					
14. Cooperate with other children in games					
15. Quickly understand the intentions of peers					
16. Play their own games and don't pay attention to their peers' games.					
17. Take the initiative to introduce themselves to new friends					
18. Never express their opinions in class					
19. Like to imitate their peers' actions and words					
20. Prone to anxiety when with other children					

Before the scale was officially used, the researcher evaluated its reliability and validity. As can be seen from Table 2, the Cronbach coefficient is $0.87 > 0.7$, which proves high consistency and high reliability.

Table 2: Reliability Statistics the Peer Interaction Skills Scale

Cronbach's Alpha	N of Items
.870	20

Regarding validity, it is shown in Table 3. The KMO value is $0.907 > 0.9$, and the Barlett p value is $0 < 0.5$, indicating that the factor analysis is very suitable.

Table 3: KMO and Bartlett's Test of the Peer Interaction Skills Scale

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		
		.907
Bartlett's Test of Sphericity	Approx. Chi-Square	1451.906
	df	190
	Sig.	.000

5. Findings

Demographic statistics

A total of 166 responses were collected through the online survey. Of these, 81 were boys (48.8%) and 85 were girls (51.2%). In terms of age distribution, 67 preschoolers were aged 3-4 (40.4%), 42 were aged 4-5 (25.3%), and 57 were aged 5-6 (34.3%). Furthermore, 110 preschoolers attended public kindergarten (66.3%), while 56 attended private kindergarten (33.7%). As shown in Table 4.

Table 4: Demographic Profiles

Demographic Information		N(%)
Gender	Boys	81 (48.8)
	Girls	85 (51.2)
Age	3-4	67 (40.4)
	4-5	42(25.3)
	5-6	57(34.3)
Type of School	Public kindergarten	110 (66.3)
	Private kindergarten	56 (33.7)

Preschoolers' Peer Interaction Skills

Preschoolers aged 3-6 years old exhibit positive peer interaction development, with 5 to 6 years old preschoolers performing better overall, $F(2, 163) = 5.624, p < .004$. Sub-scale analyses show non-significant age effects for social initiatives, $F(2, 163) = 2.921, p = .057$, and language/non-language behaviours, $F(2, 163) = 2.037, p = .134$ (refer to Figure 1).

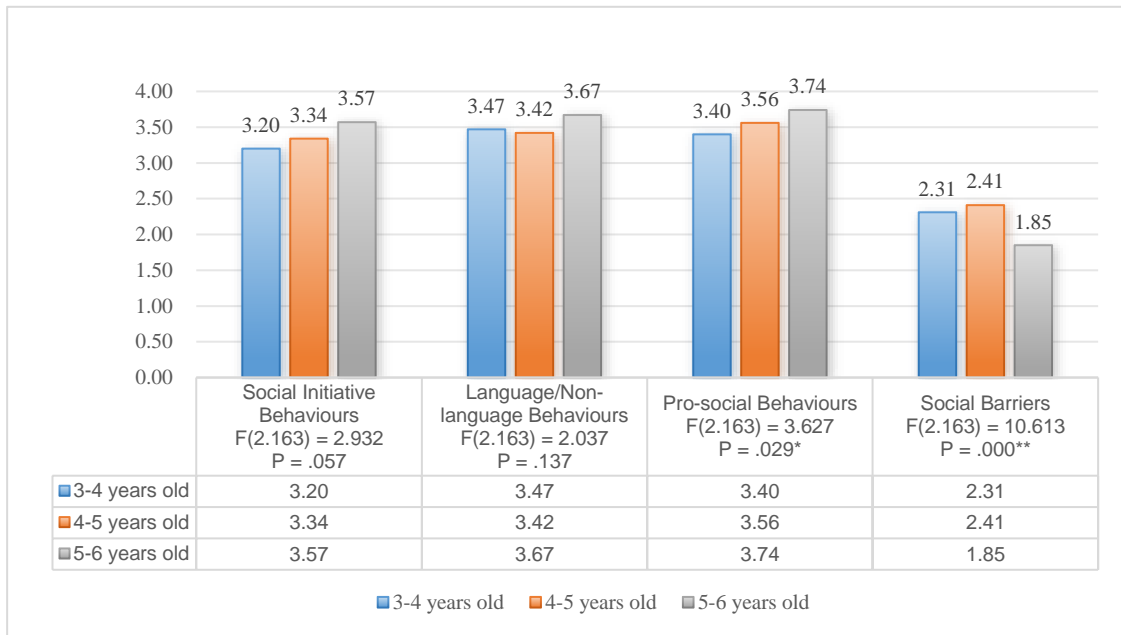


Figure 1: Peer Interaction Skills

Type of Preschool Comparison

Differences in peer interaction skills exist between public ($M = 8.00$, $SD = 2.528$) and private preschoolers ($M = 8.80$, $SD = 2.303$), $t = -1.994$, $p = .048$. Sub-scale analyses reveal significant advantages in social initiative behavior and less social barriers for private preschoolers ($p < .05$) (refer to Figure 3).

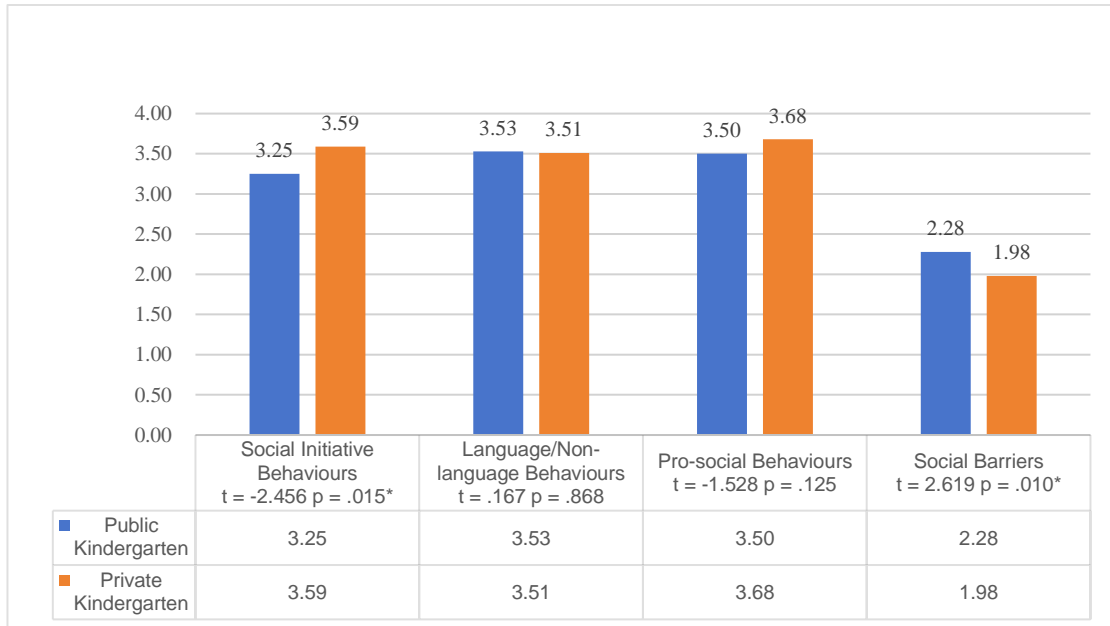


Figure 2: Type of Preschool Comparison

Overall, the study findings provide insights into the development of peer interaction among preschoolers. Children aged 3 to 6 years generally show positive peer interaction development, with 5 to 6-year-olds exhibiting stronger performance. However, age does not significantly affect two dimensions, namely social initiatives and language/non-language behaviors. Besides that, differences in peer interaction skills are observed between preschoolers attending public

and private kindergartens. Private school preschoolers tend to display more social initiative behaviors and encounter fewer social barriers.

6. Discussion and Conclusion

This paper aims to explore the current status of peer interaction skills of Chinese kindergarten children. A total of 166 children's questionnaires were collected. In summary, our study reveals positive peer interaction development among 3 to 6-year-old preschoolers, with age-related variations. While 5 to 6-year-olds display superior skills, age has minimal impact on social initiatives and language behaviors, indicating other influencing factors (Huber et al., 2019). Gender differences show no significant overall variation, yet females exhibit stronger pro-social behaviors, possibly due to temperament variances. Preschool type significantly influences interaction skills, with private preschoolers excelling, emphasizing the need for inclusive environments in public schools. Tailored support considering age, gender, and temperament is essential for effective peer interaction development in public school settings. The following is a discussion of the reflections on the findings of this study.

Age Differences in Children's Peer Interaction

The results of this study are consistent with the results of Feng Wenjuan's 2023 study on the relationship between the cognition of social rules and peer interaction skills of 4-6 years old. The results of her study showed that the development level of peer interaction skills of 4-6 year old children is relatively ideal and gradually increases with age, especially in terms of prosocial behavior. The research results of some other scholars also show consistent results (Yang, 2020; Gu, 2022). This shows that as children grow older, their peer interaction level also increases. As children grow older, their experience in all aspects, including peer interaction experience, will also increase, so children's peer interaction skills will show an upward trend with age. As children grow older, they are exposed to more and more things and receive more and more information, which further develops their cognition. Bandura emphasized that some complex behaviors of people are mainly acquired after birth. In the growth stage of children, their own factors are important, but some external factors are also crucial (Gadan, 2011). There are many factors that affect children's peer interaction, such as family, social, and personal factors (Liu et al., 2020; Zhou et al., 2023; Holst et al., 2023). This also further emphasizes the importance of acquired education. This also makes the overall development of 5-6-year-old children better than that of 3-4-year-old children and 4-5-year-old children.

Regarding children's social barriers, the results showed that children aged 4-5 were higher than those aged 3-4 and 5-6. This is different from the research of some scholars (Yang, 2020). It may be due to the different samples selected. It may also be related to the physical and mental development of young children and their gaming behaviors. Children aged 4-5 begin to play cooperative games with their peers, but they cannot communicate with them effectively, and there may be certain obstacles in communicating with their peers (Vygotsky, 1978; Rubin et al., 2011). Children aged 5-6 are still relatively stronger in language expression, more expressive in interacting with peers, and have accumulated more experience in more aspects (Chen, 2024; Ren & Wang, 2020). Children aged 3-4 mainly play parallel games (Zhou, 2018) and have less cooperative interactions with peers.

Differences in Peer Interactions among Children in Different Types of Kindergartens

According to the analysis of various results, it is found that there are significant differences in peer interaction skills, social initiative behavior and social barriers between public and private kindergartens for children aged 3-6, and the development of children in private kindergartens

is better than that in public kindergartens. This is inconsistent with the results of previous studies (Tian, 2017; Gu, 2022; Yang, 2020). This is inconsistent with the results of previous studies (Gu, 2022). Yang Nan (2020) found that in terms of the level of kindergarten and the nature of the kindergarten, children in the high-resource kindergartens have the best development of peer communication skills, but there is no significant difference between medium-resource and low-resource kindergartens.

Moreover, the peer interaction skills of children in public kindergartens are also better than those in private kindergartens. There are many factors that affect the development of children's peer interaction skills, such as the type of the kindergarten where the children attend, the level, family structure, parenting style, and the mother's education level (Lamb, 2004; Li, 2008; Yang, 2020; Gao, 2022). Both kindergartens are municipal demonstration kindergartens, but the hardware facilities and teachers are different. All teachers in public kindergartens are Chinese teachers, while private kindergartens have Chinese and foreign teachers. The curriculum is also relatively diversified. The curriculum is not only in the five major areas of health, language, society, science, and art, but also has special courses such as equestrianism and programming. These factors may affect children's peer interactions, so there are still certain differences between various types of kindergartens.

Conclusion

In summary, children's peer interaction skills vary, and there are many influencing factors. As we delve deeper into the dynamics of preschool children's peer interaction skills, we are increasingly aware of the central role of peer relationships in children's early development. Teachers, parents, and education policy makers need to work together to promote children's social skill development by creating a supportive educational environment and implementing effective intervention strategies. Our research not only reveals the complexity of peer interactions, but also provides valuable insights for future educational practices. We hope that these findings will inspire more research and practice to ensure that all children can acquire the necessary social skills in their early development and lay a solid foundation for their future.

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