Uncovering the School Readiness Divide: A Study of Left-behind Preschool Children in Rural China and the Impact of Home Environment

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Abstract
School readiness is crucial in child development, with significant disparities observed between disadvantaged and non-disadvantaged children. This study investigates preschoolers' readiness in rural China, surveying 226 children, including Left-Behind Children (LBCs), in Henan Province. It examines school readiness differences between LBCs and non-LBCs and explores factors such as caregiver education, home learning environments, and attitudes. Findings reveal disparities in school readiness, emphasizing caregiver attitudes and expectations as influential. This research contributes to the discourse on school readiness in non-Western contexts, urging educators to address LBCs' needs and policymakers to prioritize early childhood programs and supportive home environments.
Keywords: School Readiness, Left-behind children, Non-left-behind children, Home Environment

Introduction
The phenomenon of left-behind children has reverberated globally, presenting a complex societal challenge. These children, whose parents migrate for work or study, often find themselves in the care of extended family or guardians, while their parents seek better economic prospects in urban areas. In the context of rural China, this issue has taken on significant dimensions. According to recent statistics, millions of Chinese children experience separation from their parents for extended periods, with the rural regions bearing a substantial burden of this challenge (Zhou et al., 2020).

One pressing concern within the broader left-behind children phenomenon is the readiness of these children for formal education. The school readiness of preschool children is a critical precursor to their academic success and overall development (Rimm-Kaufman & Pianta, 2000). Early literacy, numeracy, motor skills, and socioemotional competence have

been identified as key determinants of school readiness (Blair, 2002; Pianta et al., 2007). Understanding the school readiness of left-behind preschool children in rural China is of paramount importance due to its implications for their future academic achievements and well-being.

While school readiness is a pivotal aspect of early childhood development, left-behind preschool children in rural China face distinct challenges. The unique context of rural China, marked by economic disparities and the Household Registration System, exacerbates the separation of children from their parents (Afridi et al., 2015). In 2015, over 61 million children in China were left behind in rural areas, representing nearly one-fifth of the country's total child population (Duan et al., 2017). These demographic faces obstacle ranging from limited access to early education resources to potential socioemotional challenges (Griffin et al., 2016).

While the decision to leave children behind is often motivated by the pursuit of improved economic opportunities and a better life, it comes with certain advantages for parents. These advantages include increased income potential, the ability to support the family financially, and the hope for a brighter future for their children through better access to education and resources in urban areas.

Conversely, left-behind preschool children experience profound disadvantages. Separation from parents can lead to feelings of abandonment, loss of confidence, and potential mental health issues (Morrison & Hindman, 2019). These difficulties can extend to their school readiness, as the home environment plays a pivotal role in fostering early literacy, numeracy, and socioemotional skills (Katz, 2015; Pianta et al., 2007).

A nurturing home environment, characterized by access to abundant learning materials and caregiver education, has been associated with enhanced school readiness (Sénéchal & LeFevre, 2008). Children who grow up in such environments tend to exhibit stronger early literacy and numeracy skills, which are predictive of later academic success (Baydar et al., 1993). Despite the growing recognition of the importance of home environment in shaping school readiness, there is a noticeable gap in the literature, particularly concerning left-behind preschool children in China. Existing studies have primarily focused on the disadvantages faced by these children, with limited exploration of how home environments can mitigate or exacerbate their school readiness challenges. This research aims to bridge this gap by investigating the impact of home environment on the school readiness of left-behind preschool children in rural China.

A conducive home environment is conducive to school readiness. The availability of a variety of learning materials, caregiver education, and an atmosphere that promotes learning can significantly boost a child's readiness for formal education (Lauricella et al., 2014). Conversely, when the home environment lacks resources or caregiver engagement, it can hinder school readiness. This issue is particularly pertinent for left-behind preschool children, as they may not receive the necessary support and resources for early literacy and numeracy development.

The primary aim of this research is to comprehensively assess the school readiness of left-behind preschool children in rural China and to discern the impact of the home environment on their readiness for formal education.

To address the disparities in school readiness and academic performance, it is crucial to consider the home environment in which children are raised (Dotterer et al., 2012). Hill (2001) examined the relationship between low-income parents and children, assessing pre-reading and pre-mathematics readiness in African American and European kindergarten

children.Their findings highlighted the associations between parental involvement, behaviors, and expectations with the academic performance of low-income children. Other studies have suggested that, when factors such as time and individual attributes are taken into account, some children from low-income families can attain the same level of skills as high-income children (Sabol et al., 2018). Hence, it is imperative to explore the extent to which socioeconomic disadvantage affects children of migrant workers who are left behind in rural areas of China.

The study of school readiness among preschool children in China is an evolving field of research, with local scholars working to contextualize this concept within the unique cultural and socioeconomic conditions of the country (Jing, 2007; Zhang & Gai, 2005). Numerous studies have delved into the impact of the home environment and family involvement on children's school readiness, emphasizing the roles of family socioeconomic status, parental attitudes, and the home learning environment in children's literacy development (Chen et al., 2009; Li, 2020).

Research has demonstrated that the earlier parents engage in literacy activities with their children, the more profound and enduring the effects (Wilder, 2014). Family-based literacy activities have been shown to account for 12-18% of the variance in children's language scores (Grover et al., 1994), emphasizing the importance of family-based parental involvement, particularly in low socioeconomic status families, for promoting children's language development, comprehension, and listening skills (Li et al., 2020). Studies have also suggested that the impact of parental involvement on children's development may outweigh factors such as parental socioeconomic status or education level (Pillinger & Wood, 2014).

The present research aims to examine school readiness among preschool children aged 3 to 6 years old in China, encompassing aspects of early literacy, early numeracy, gross and fine motor skills, and social-emotional development. Both family background and the home learning environment will be considered to investigate their impact on the school readiness of children who reside with their parents (non-LBC) and those who do not (LBC). Utilizing home environment indicators derived from Western literature, this study seeks to ascertain whether a similar relationship between three facets of the home environment and school readiness exists among rural preschool-aged LBC and non-LBC in China.

The study objectives are as follows:
1. To explore if significant differences in school readiness exist between left-behind (LBC) rural preschool children and their non-left-behind (non-LBC) counterparts in China.
2. To explore whether there are significant differences in the development of different skills necessary for school readiness among these children.
3. To examine the extent to which factors related to the home environment can predict the school readiness of rural preschool children.

The following research questions will be addressed:
1. Are significant differences in school readiness observed between left-behind rural preschool children (LBC) and non-left behind (non-LBC) children in China?
2. Do significant differences exist in the development of different skills required for school among these children?
3. To what extent do home-related factors predict the school readiness of rural preschool children?

This research endeavors to shed light on the multifaceted aspects of school readiness in the context of rural China, with a particular focus on the unique challenges faced by left-

behind children and the influence of their home environments on their readiness for formal education.

Method
Participants

This study adopted a correlational study approach to recruit participants from a single kindergarten situated in a rural area of Henan province, China. The study method was chosen due to its advantages in conducting empirical investigations within the real-life context, employing multiple sources of evidence to explore a phenomenon.

The study's participants included preschool children and their primary caregivers. These children were aged 5-6 years, residing in rural China, and categorized into two groups: Left-behind Children (LBC) and non-Left-behind Children (non-LBC). In China, the age of 5 marks the final year of preschool, preparing children for the transition to primary school.

A total of 226 children between the ages of 5 and 6 were recruited from the selected kindergarten. The primary language of instruction in the kindergarten was Mandarin, and all participants were considered Mandarin native speakers. The kindergarten provided a full-day program lasting 8 hours. The mean age (M) of the children was 66.21 months, with a standard deviation (SD) of 3.62. Of the participants, 52.2% were boys (N = 118), while 47.8% were girls (N = 108). Among them, 34.5% were LBC (N = 78), and 65.5% were non-LBC (N = 148).

Measures

In this study, two instruments were employed to assess school readiness and the home environment: the International Development and Early Learning Assessment (IDELA) and the IDELA Caregiver Questionnaire.

School Readiness

The IDELA assessment evaluated four dimensions of school readiness: literacy skills, numeracy skills, social-emotional skills, and gross and fine motor skills. The assessment, conducted on a one-on-one basis, required an average of 30 minutes to complete. The materials used included a pencil, blank paper, small counting items (e.g., beans, buttons, or sticks), picture cards, and a Mandarin storybook featuring both pictures and text.

The assessment consisted of a total of 22 items, comprising 8 for literacy, 7 for numeracy, 4 for gross and fine motor skills, and 5 for social-emotional skills. Children were instructed to perform each task, which was then scored. Most items were scored as "correct/incorrect" on a binary scale (0 or 1), with '0' indicating an inability to perform the task and '1' representing task proficiency. A score of '999' was assigned if the child refused or was uncertain. Several items received continuous scores, such as the number of jumps (movement) and the number of friends. The final score for each domain was calculated by summing the scores of each subtask. Cumulative scores were expressed as percentages, with higher percentages indicating greater proficiency in a specific sub-domain of school readiness.

Here are some examples of the task of each sub-domain of school readiness.

a. Emergent literacy task: *I am going to point a letter, and can you read out the letter to me?*

b. Emergent numeracy task: *There are some sticks here. Could you give me 3 sticks please? And could you give me 8?*

c. Motor skills task: *Could you please hop on one foot?*

d. Social-emotional skills task: *Could you please tell me your name of friends?*

Home Environment

The IDELA Caregiver Questionnaire was employed to assess the home environment. The questionnaire comprised 36 items, covering caregiver education, the home learning environment, and caregiver attitudes and expectations related to child learning and development. After obtaining consent from the families to participate in the study, the questionnaire was administered via guided phone interviews between the researcher and the caregivers.

The measures and scoring for each component were as follows:

a. *Caregiver education* is assessed using a four-point ordinal scale, with categories "under primary school" (1), "compulsory education" (2), "higher education" (3), and "non-known" (999). Higher scores indicated a higher level of caregiver education.

b. *Home learning environment* is comprised three indicators:

   I. *Availability of printed materials* Example: A composite of five items scored on a four-point ordinal scale ranging from "under 5 materials" (1) to "above 20 materials" (4), measuring the availability of storybooks, coloring books, textbooks, magazines, newspapers, and educational materials. Higher scores indicated greater availability. Example: *how many story books do you have at home?*

   II. *Availability of toys or play materials,* a composite of 10 items scored on a continuous scale ranging from 0-10, assessing the types of toys and play materials available, such as puzzles and toy cars. Higher scores indicated greater variety. Example: *do you have toy cars at home?*

   III. *Home-based Literacy activities,* a composite of 13 items scored on a continuous scale ranging from 0-13, capturing activities conducted by caregivers at home, such as reading stories and engaging in outdoor activities. Higher scores reflected greater engagement in literacy activities. Examples: *Do you tell story to your child?*

Composite scores for each indicator were converted into z-scores to ensure equal weighting. The Home Learning Environment score was computed as the sum of the z-scores for the three indicators.

c. *Caregiver attitudes and expectations,* assessed through six items scored on a five-point ordinal scale ranging from "quite agree" (5) to "other" (1) to measure the extent of agreement with statements regarding the value and expectations related to early learning experiences. A composite score was computed from the six items, with higher scores indicating more positive attitudes and higher expectations. Examples: *'Caregivers play a very important role in a child's learning and development.', 'Knowing how to read and write is important for your child to have a good/productive life.'*

Following approval from the research review board and obtaining parental consent, the study recruited participants. The data collected were analyzed using SPSS version 26, employing multivariate statistical techniques.

Results
Pilot study

Before commencing the main research, a pilot study was conducted to refine the research instruments and procedures. The pilot study involved a small sample of 30 preschool

children from the same rural kindergarten. This preliminary investigation confirmed the feasibility and appropriateness of the International Development and Early Learning Assessment (IDELA) and the IDELA Caregiver Questionnaire for assessing school readiness and home environment among rural preschool children.

Reliability and Validity

To ensure the reliability and validity of the research instruments, internal consistency analyses were conducted. The Cronbach's alpha coefficients for both the IDELA and the IDELA Caregiver Questionnaire were found to be satisfactory, indicating strong internal consistency among the items ($\alpha > 0.80$).

Construct validity was examined through exploratory factor analysis, which revealed that the items on each instrument loaded onto the expected factors, supporting their construct validity.

Confirmatory Factor Analysis (CFA) utilized AMOS software to evaluate the goodness-of-fit indices for the model. It also shown validity and discriminant validity analysis result.

The model fit statistics from the CFA are shown in Table 1

Table 1
Model Fit Summary

Model	CMIN	DF	P	CMIN/DF	RMSEA
Default model	87.501	38	< 0.001	2.303	0.076
Saturated model	-	0	-	-	-
Independence model	1675.734	55	< 0.001	30.468	0.362

The goodness-of-fit indices and baseline comparisons from the CFA are presented in Table 2.

Table 2 Baseline Comparisons

Model	NFI	RFI	IFI	TLI	CFI
Default model	0.948	0.924	0.970	0.956	0.969
Saturated model	1.000	1.000	1.000	-	-
Independence model	0.000	0.000	0.000	-	-

The integrated analysis reveals that the CFA results suggest an adequate fit of the proposed model to the observed data, supported by various fit indices. Additionally, the validity analysis demonstrates satisfactory internal consistency reliability (CR > 0.7), convergent validity (AVE > 0.5).

In conclusion, the integrated analysis provides robust support for the measurement model's fit of goodness, validity and discriminant validity.

Standard scores were applied to the variables under investigation in this study to enable comparability and enhance the rigor of the analyses. Standardization using z-scores not only facilitates data comparability but also eliminates unit differences in the raw scores (Engle et al., 2011). This standardization method is commonly employed to assess children's early learning and development across different scales or test versions (Everitt & Hothorn, 2011).

The following section presents findings from both descriptive and statistical analyses. Table 3 provides an overview of the characteristics of the 226 preschool children and their school readiness. Basic descriptive statistics for the four subscales of school readiness are also included.

Table 3
Descriptive analyses of participants (N=226)

Variable	Skewness	Kurtosis	Min	Max
Age	-0.158	-1.005	60	72
Total School Readiness	-0.740	-0.60	-2.84	2.15
Early-literacy	-0.13	-0.006	-2.45	2.09
Early-numeracy	-0.504	-0.789	-2.33	1.11
Motor skills	0.388	-0.764	-1.77	2.11
Socioemotional skills	0.488	-1.065	-1.11	1.89

Are significant differences in school readiness observed between left-behind rural preschool children (LBC) and non-left behind (non-LBC) children in China?

Table 4 addresses the first and second research questions, investigating differences in total school readiness and specific subscales between preschool Left-behind Children (LBC) and non-Left-behind Children (non-LBC) in rural China.

Table 4
Total school readiness and specific subscale in preschool LBC and non-LBC

Variable	LBC		Non-LBC	
	M	SD	M	SD
Total School Readiness	-0.70**	0.97	0.37**	0.80
Early literacy	0.06	1.05	-0.03	0.97
Early numeracy	-0.63**	0.89	0.33**	0.89
Motor skills	-0.44**	1.09	0.23**	0.86
Socioemotional skills	-1.02**	0.28	0.54	0.81
**Independent sample t-tests indicated a highly significant difference between the groups at *p* < 0.001				
* Independent sample t-tests indicated a significant difference between the groups at *p* < 0.01				

Independent sample t-tests were conducted to compare the school readiness of left-behind rural preschool children (LBC) and non-left behind (non-LBC) children. The results indicated a highly significant difference between the two groups (t = -8.87, p < 0.001). Non-LBC children exhibited significantly higher levels of school readiness (M = 0.37, SD = 0.80) compared to LBC children (M = -0.70, SD = 0.97).

Do significant differences exist in the development of different skills required for school among these children?

Further analysis of the subdomains of school readiness revealed differential patterns. In terms of early numeracy skills, non-LBC children displayed significantly higher levels (M =

0.33, SD = 0.89) than LBC children (M = -0.63, SD = 0.89), with a highly significant effect (t = -7.66, p < 0.001). Similar patterns were observed for motor skills, with non-LBC children (M = 0.23, SD = 0.86) surpassing LBC children (M = -0.44, SD = 1.09), showing a highly significant difference (t = -5.05, p < 0.001). In contrast, no significant difference was found in early-literacy skills between LBC (M = 0.06, SD = 1.05) and non-LBC children (M = -0.03, SD = 0.97), as indicated by a non-significant t-test (t = 0.69, p > 0.05). The socioemotional skills of non-LBC children (M = 0.54, SD = 0.81) were also significantly higher than those of LBC children (M = -1.02, SD = 0.28), with a highly significant effect (t = -16.46, p < 0.001).

To what extent do home-related factors predict the school readiness of rural preschool children?

Table 5 presents the correlation analysis of variables related to preschool children in rural China.

Table 5
Correlation analysis of Home Environment Variables in rural preschool children

Variables	Total SR	C.Edu.	H learning environ	C. attic& exec
Total SR	—			
Caregiver Education	0.23*	—		
Home learning environment	0.35**	0.09	—	
Caregiver attitude &expectation	0.39**	0.03	0.22*	—
*p<0.01 **p<0.001				

As shown in Table 5, school readiness among preschool children in rural areas exhibited significant associations with caregiver education, home learning environment, and caregiver attitudes and expectations.

Multiple linear regression analysis was conducted to explore the predictors of school readiness among rural preschool children. The regression model included caregiver education, home learning environment, and caregiver attitudes and expectations as independent variables.

Results indicated that caregiver education had a negative significant impact on rural preschoolers' school readiness (B = -0.23, SE = 0.07, β = -0.23, p < 0.05). Conversely, home learning environment (B = 0.35, SE = 0.06, β = 0.35, p < 0.01) and caregiver attitudes and expectations (B = 0.39, SE = 0.61, β = 0.39, p < 0.01) had a positive and significant association with children's school readiness. The model explained a significant portion of the variance in school readiness (R² = 0.32, p < 0.001).

Table 6 presents unstandardized and standardized regression coefficients for the model. The R² coefficients indicate the proportion of variance in children's school readiness explained by all predictors in the model. Caregiver education had a significant negative impact on school readiness in rural preschoolers, while caregiver attitudes and expectations and home learning environment were positively associated with children's school readiness.

Table 6
Linear regression analyses using home environment to predict school readiness (N=226)

Predicator variable	B	SE	β	R²
Caregiver Education	-0.23	0.07	-0.23*	0.05
Home learning environment	0.35	0.06	0.35**	0.12
Caregiver attitudes & expectations	0.39	0.61	0.39**	0.15
Dependent Variable: school readiness				
*p<0.05 **p<0.01				

These findings suggest that home-related factors, particularly caregiver education, home learning environment, and caregiver attitudes and expectations, play a crucial role in predicting the school readiness of rural preschool children in China.

Discussion

The findings of this study shed light on critical aspects of school readiness among rural preschool children in China, particularly those who are left behind (LBC), and the profound influence of the home environment on their development. The discussion delves into the implications and underlying factors contributing to the observed disparities in school readiness, providing a nuanced understanding of this complex issue.

As anticipated for a rural village-based sample, the study revealed an overall lower average level of school readiness among the participating children. This finding underscores the challenges faced by rural children in China, where limited access to resources and educational opportunities can hinder their early development. The study's focus on left-behind preschool children (LBC) in rural areas further accentuated these challenges.

A pivotal finding of this study was the significant disparity in school readiness between LBC and their non-LBC counterparts. Notably, LBC exhibited lower overall school readiness, with the most pronounced differences observed in the subscales of early numeracy, motor skills, and socioemotional skills. This pattern aligns with research conducted in disadvantaged environments in Western countries (Lee & D, 2002; Lu et al., 2016; Wickstrom et al., 2004) and emphasizes the vulnerability of LBC in rural China.

Several factors contribute to these disparities. Firstly, the caregiving structure for rural LBC, often overseen by grandparents or a single parent, can impact their access to educational support. The limited educational background of rural grandparents, coupled with their primary focus on the children's physical well-being, may result in insufficient attention to aspects of early literacy and mathematics. Consequently, LBC may lack the necessary support and engagement required for a robust early education, potentially leading to reduced interest in learning. The absence of a complete and enriching family education environment further exacerbates these challenges (Min, 2020). Furthermore, rural LBC are more likely to grow up in disadvantaged settings, which may increase their risk of behavioral problems, compounding the obstacles they face (Chen, 2012; Ling et al., 2012). These factors collectively underscore the urgent need for targeted interventions to enhance the school readiness of LBC in rural China.

The study highlights the pivotal roles played by the home learning environment and caregiver attitudes and expectations in shaping the school readiness of rural preschool children. These findings resonate with prior research conducted in Western countries, emphasizing the global relevance of these factors in child development.

Caregiver education level emerged as a significant predictor of children's academic achievement, aligning with extensive research highlighting the influence of parental education on children's outcomes (Crosnoe & Fuligni, 2012; Wolf & McCoy, 2019). While some studies have yielded mixed results regarding the impact of caregiver education on gross motor development, this study underscores the multifaceted nature of this relationship (K et al., 2012; Özal et al., 2020).

The family environment emerged as a critical context for child development, with a conducive home learning environment positively influencing school readiness. These findings corroborate existing research underscoring the importance of factors such as family income and parenting styles in shaping children's readiness for school (Mutoro, 2017; Stuart Parrigon & Kerns, 2016), parenting style (Belsky, 2006 ; Bethesda & Maryland, 2000), and so on. Furthermore, the present study expands on this understanding by considering not only parent-child reading activities but also the type and quantity of learning materials as significant contributors to school readiness. In line with the current study, existing research has consistently demonstrated that a conducive home learning environment positively influences children's readiness for school (Lacey & Minnis, 2020; Lauricella et al., 2014; Martha et al., 2012). The present study uniquely expands this understanding by not only assessing parent-child reading activities but also considering the type and quantity of learning materials, both of which were found to significantly impact children's school readiness.

In addition to the home learning environment, caregiver attitudes and expectations emerged as influential factors in rural preschoolers' school readiness. This aligns with prior research, encompassing caregivers' values regarding education, academic expectations for children, and beliefs about attributions of success (Oades-sese & Li, 2011). While many previous studies have primarily focused on maternal attitudes and expectations (Lombardi et al., 2017; Yamamoto, 2015), the present study extended its scope to include paternal perspectives, yielding consistent results.

In conclusion, this study underscores the intricate relationship between school readiness, the home environment, and caregiver attitudes among rural preschool children in China. The findings emphasize the vulnerability of left-behind children and the critical need for targeted interventions to bridge the school readiness divide. Policymakers, educators, and communities should collaborate to enhance the educational support provided to rural LBC, fostering a conducive home environment and promoting positive caregiver attitudes and expectations. By addressing these multifaceted challenges, we can work towards ensuring that all children, regardless of their background, have an equitable start to their educational journey.

Theoretical and Contextual Contribution

This study provides a significant theoretical contribution by shedding light on the impact of the home environment on the school readiness of left-behind preschool children in rural China. It expands the scope of preschool education research by addressing the unique challenges faced by this specific population. Moreover, our research highlights the crucial influence of the household setting in moulding children's preparedness for school, with significant implications for educational policy and practice.

Contribution to Existing Knowledge

This study addresses a knowledge gap in the literature by conducting an in-depth study of left-behind children in rural China. This research offers new insight into this specific group, highlighting their unique educational challenges and opportunities for improving their

preschool educational experiences. These discoveries possess practical significance when developing policies and interventions that aim to address the school readiness gap.

Role in the Context

This study is of paramount significance in the specific context of rural China. It provides policymakers and educational practitioners with guidance on how to enhance the school readiness of children left behind in rural areas. The results not only enhance the lives of this specific group but also offer useful insights to other regions and developing countries with similar challenges.

Limitations of the Study

Despite confirming the differences in school readiness between Left-behind Children (LBC) and non-Left-behind Children (non-LBC) and identifying the significant association between school readiness and the home environment, several limitations should be acknowledged. Firstly, the sample size was relatively small, which may have limited the statistical power for conducting more robust analyses. Additionally, the generalizability of the study's findings is constrained by the homogeneity of the demographic characteristics within the sample. Another limitation pertains to the limited number of measures employed in the study. To enhance the validity and generalizability of the results, future research could benefit from a larger and more diverse sample. Furthermore, alternative analytical approaches, such as longitudinal designs and structural equation modeling, could be considered to elucidate the underlying mechanisms of change. In terms of research design, the present study primarily adopted a quantitative approach. A complementary qualitative investigation, involving classroom observations and interviews with educators, could provide valuable insights into the challenges faced by rural preschool children. Such insights are not only pertinent for empirically studying school readiness but also pivotal for informing the development and implementation of effective intervention strategies.

Implications

The findings of this study underscore the urgency of tailored educational policies and interventions for left-behind preschool children in rural China. Policymakers should prioritize the development of school readiness programs that specifically target this demographic. These programs should aim to bridge the school readiness gap by focusing on early literacy, numeracy, motor skills, and socioemotional development. Moreover, they should consider the unique challenges faced by caregivers, such as grandparents, in providing comprehensive early education.

To enhance school readiness, it is imperative to involve families and communities actively. Parents, particularly those left behind, should be empowered with resources and guidance to support their children's early learning at home. Collaborative efforts between schools, local communities, and government agencies can facilitate the creation of supportive networks that offer educational resources, workshops, and guidance to caregivers. Such initiatives can significantly contribute to improving the school readiness of left-behind preschool children.

Educators and policymakers should adopt a holistic approach to assessing school readiness. Beyond traditional academic measures, assessments should encompass a broader range of skills, including socioemotional and motor skills. By considering these multifaceted aspects, schools and kindergartens can tailor their curriculum to address specific needs and foster a more well-rounded development of children.

Future research in this field should aim for more diverse and larger samples to ensure the generalizability of findings. Exploring longitudinal designs and employing advanced analytical methods, such as structural equation modeling, can provide deeper insights into the mechanisms driving school readiness disparities. Qualitative investigations, including classroom observations and educator interviews, can offer a richer understanding of the challenges faced by rural preschool children and inform the design of effective intervention strategies.

By implementing these implications, educators, policymakers, and researchers can work collaboratively to improve the school readiness and overall educational experiences of left-behind preschool children in rural China, ultimately promoting educational equity and lifelong learning outcomes.

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