ORIGINAL ARTICLE

Prevalence and Factors Affecting Delayed Development of Early Childhood in the Rangsit Children's Home

Adidsuda Fuengfoo, MD[1], Tidarat Tippo, MD[1]

[1] Division of Developmental and Behavioral Pediatric, Department of Pediatrics, Queen Sirikit National Institute of Child Health, Bangkok, Thailand

Background: The period from birth to five years is crucial for brain growth, more than at any other time in life. Proper development during this time can significantly impact the child's foundational quality of life. This is especially true for children in foster care, who often come from backgrounds that put them at risk of developmental delays.

Objective: To investigate the prevalence of suspected developmental delays and identify factors associated with these delays in early childhood at Rangsit Children's Home.

Materials and Methods: A cross-sectional descriptive study was conducted, focusing on 88 children aged one to five years at Rangsit Children's Home, along with eight caregivers. The data were collected between July 1, 2022 and June 30, 2023, using the Early Childhood Development Surveillance and Promotion Manual (DSPM) for developmental evaluation and questionnaires for gathering general information and developmental factors, completed by caregivers. Data analysis was done using SPSS Statistics, version 25.

Results: Among 88 children, most were male and aged three to five years. A significant number of these children came from broken families, with the majority entering the welfare center at zero to one year of age. The developmental assessment revealed that 56 children (63.6%) were suspected of having developmental delays, predominantly in language understanding and usage. Factors significantly associated with these delays include staying less than a year in the care home between the age of one to three years, weight, and being under the care of caregivers with at least a grade six or vocational certificate education.

Conclusion: A notable 63.6% of children in the Rangsit Children's Home showed suspected developmental delays, with language skills being the most affected area. Key factors associated with these delays include the child's age, being one to three years, weight, duration of stay of less than one year, and caregiver's education level. These findings suggest the need to enhance developmental support, particularly in language development during early institutional care.

Keywords: Early childhood; Factors; Welfare institutions; Developmental screening; DSPM

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Early childhood development (ECD) is pivotal for establishing a lifelong health foundation, with up to 80% of brain development in the first five years of life. Consequently, early experiences play a crucial role in determining the trajectory of cognitive, emotional, and physical development[1,2]. Children in foster homes are particularly susceptible to developmental delays due to adverse childhood experiences (ACEs) such as neglect, abuse, and unstable environments. Research consistently indicates that children who experience ACEs, especially in foster care, have higher risks of developmental delays and behavioral problems that can persist into adulthood[3,5]. A study conducted at the Wiang Ping Children's Home in Thailand revealed that 84.1% of orphans exhibited developmental delays, a rate approximately three times higher than that of the general population[6]. Moreover, the quality of caregiving plays a critical role in developmental outcomes. Stable, nurturing, and responsive caregiving[7,8] is associated with improved executive functioning and social skills, while inconsistent care can exacerbate language, motor, and social-emotional delays[9]. Thailand's public health initiatives[10] promote utilizing Development Surveillance and Promotion Manual (DSPM) for early detection and intervention. These models[11] have shown successful improvement in developmental outcomes, particularly for children at risk of delays. Despite advancements in research

Correspondence to:

Fuengfoo A.

Division of Developmental and Behavioral Pediatrics, Department of Pediatrics, Queen Sirikit National Institute of Child Health, 420/8 Rajavithi Road, Ratchathewi, Bangkok 10400, Thailand.

Phone: +66-81-9243198

Email: dr_adidsuda@yahoo.com

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and intervention strategies, significant gaps remain in understanding the systemic factors influencing[12] developmental outcomes. However, implementing ECD programs[12,13] to different cultures[14] remains a challenge, requiring further research to ensure all children in care receive adequate support to achieve their full developmental potential.

Objective

The first objective was to assess the prevalence of suspected developmental delays among children aged one to five years at the Rangsit Children's Home using DSPM[13,14]. The second objective was to identify factors influencing the development of these children.

Materials and Methods

The present study aimed to assess the prevalence and determinants of developmental delays among children aged one to five years residing at the Rangsit Children's Home, employing a cross-sectional analytical design. The present research needed to collect comprehensive data on a range of factors potentially influencing the developmental trajectories of these children. To achieve this, structured interviews would be conducted with caregivers, who were positioned to provide crucial insights into both general and specific aspects of child development.

Sampling selection

For child participants, a stratified random sampling technique was used to recruit the sample from the population of 112 children at the Rangsit Children's Home. The sample size of 88 children was determined using Taro Yamane's formula (1973) with a 95% confidence level and a 5% margin of error. The stratification was based on two age groups, one to three years as toddlers, and three to five years as preschool, ensuring proportional representation of developmental stages.

Inclusion criteria included 1) age between one and five years, 2) Thai nationality, 3) current residence at the Rangsit Children's Home, and 4) absence of severe congenital conditions that might independently affect developmental outcomes. Children were excluded if they had diagnosed conditions that could confound developmental assessment results.

For caregivers, a purposive sampling was used based on specific criteria as 1) direct responsibility for the selected children, 2) minimum six months of continuous caregiving experience at the facility, and 3) regular daily interaction with the children. This selection ensured that participating caregivers had sufficient experience and knowledge of their assigned children's developmental patterns. Eight out of 18 primary caregivers were recruited to participate in the study. The caregiver-to-child ratio in the present study final sample was 1:11 and aligned with typical institutional care settings while allowing for meaningful assessment of caregiver influence on child development. This sampling strategy enabled the researchers to maintain methodological rigor while ensuring practical feasibility of the study.

Following ethical approval and permission by the Human Research Ethics Committee of the Queen Sirikit National Institute of Child Health (REC QSNICH 36T), the research project would be presented to the director of Rangsit Children's Home. Participants would be given time to review the consent form, and the opportunities to ask questions to ensure full understanding. The consent form for each child will be signed by the director of Rangsit Children's Home, witnessed by a social worker from the Ministry of Social Development and Human Security (Ref. No. 5/2565, Date of approved 24 June 2022).

Assessment tools

1) DSPM: A certified pediatrician in child development performed the assessment through interpersonal communication with children aged zero to six years. The assessment took approximately 30 minutes for each child. Children who were identified as developmental delays would be referred for further diagnosis and intervention.

2) Interview: A 10-minute interview was used to interview caregivers in the mentor teacher's office to gather general information and identify factors influencing child development.

Data collection

The data collection procedures included the training of medical personnel in using the DSPM tool. The definitions of key variables, such as weight categories as normal, overweight, and underweight, height categories as normal or short, and congenital diseases, were given to ensure clarity and consistency.

Statistical analysis

The data were analyzed using IBM SPSS Statistics, version 25.0 (IBM Corp., Armonk, NY, USA), employing both descriptive and inferential statistical techniques to derive insights from the

collected data. Statistical significance was assessed at p-value less than 0.05. Descriptive statistics were used to summarize the characteristics of the study participants and the prevalence of suspected developmental delays. Chi-square tests or Fisher's exact tests were used to assess the relationships between categorical variables. For continuous variables, such as the child's age and duration of stay in the institution, independent t-tests or Mann-Whitney U tests were used, depending on the data distribution and assumptions of normality. Multivariable logistic regression analysis was conducted to identify factors independently associated with suspected developmental delays while controlling for potential confounders. Variables with p-values less than 0.20 in the univariate analyses were considered for inclusion in the multivariable model. A backward stepwise elimination approach was used to obtain the final model, retaining variables with p-values less than 0.05. Adjusted odds ratios (aORs) and their corresponding 95% confidence intervals (CIs) were reported to quantify the strength of the associations.

Results

From Table 1, the demographic breakdown for group 1, children aged one to five years, revealed the selection of 88 participants. This included 48 males (54.5%) and 40 females (45.5%). A majority of 59 children were aged three to five years, or pre-school age, constituting 67.0% of the sample. Regarding health metrics, 57 children were within the normal weight range (84.1%), and 74 exhibited normal height (84.1%). Additionally, 83 children did not have congenital diseases, representing 94.3% of the sample. Variables related to the shelter indicated that the predominant reason for children's placement in the shelter was family breakup, affecting 25 individuals (28.4%). There were various other reasons for residence at the welfare center, impacting 24 children (27.3%). Concerning the age at which children started living in the welfare center, the largest group comprised those aged zero to one year, totaling 45 children (51.1%). Moreover, the majority, 57 children (64.8%), had been living in the shelter for more than one year.

Table 2 represented the eight caregivers who were analyzed, out of the 18. All were female aged between 41 and 50 years and had been caring for the children for more than six months. The predominant education level among the caregivers was Grade 6. Due to the limitation of a single-institution study, the sample size may not fully represent the broader population of children in institutional care across Thailand. The selection of eight from 18 caregivers was influenced by practical constraints, including work shift patterns and length of employment. While this might introduce potential selection bias, a rigorous inclusion criterion was maintained requiring minimum six months of continuous caregiving experience to ensure familiarity with the children.

Figure 1 shows the prevalence of suspected developmental delays among the children at the Rangsit Children's Home and the outcomes from DSPM. Over half of the children (63.6%) were suspected of developmental delays overall. A higher percentage of children were adequately developing gross motor skills at 68.2%, compared

Table 1. Demographic characteristics of participants (n=88)

Personal characteristics	Number of children n (%)
Sex	
Male	48 (54.50)
Female	40 (45.50)
Age	
1 to 3 years (toddler)	29 (33.00)
3 to 5 years (preschool)	59 (67.00)
Weight	
Normal	57 (64.80)
Overweight	11 (12.50)
Underweight	20 (22.70)
Height	
Normal	74 (84.10)
Short	14 (15.90)
Congenital diseases	
No	83 (94.30)
Yes	5 (5.70)
Reasons why children are placed in shelters	
Broken family	25 (28.40)
Poor family	13 (14.80)
Parents are convicted	18 (20.50)
Stray	8 (9.10)
Others	24 (27.30)
Age entering foster care	
0 to 1 year	45 (51.10)
1 to 2 years	12 (13.60)
2 to 3 years	17 (19.30)
3 to 4 years	11 (12.50)
4 to 5 years	3 (3.40)
Duration of Stay	
Less than 1 year	31 (35.20)
More than 1 year	57 (64.80)

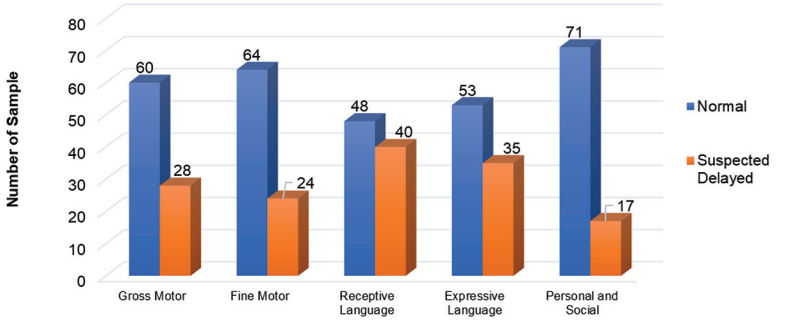

Figure 1. The prevalence of developmental delay suspicions among participants at Rangsit Children's Home across five developmental areas

Table 2. Demographic characteristics of caregivers (n=8)

Personal characteristics	Number of caregivers n (%)
Sex	
Male	0 (0.00)
Female	8 (100)
Age	
Less than 20 years	0 (0.00)
21 to 30 years	0 (0.00)
31 to 40 years	1 (12.50)
41 to 50 years	5 (62.50)
51 to 60 years	2 (25.00)
Education level	
Less than secondary school	0 (0.00)
Secondary school/vocational certificate	6 (75.00)
Associate degree/vocational certificate	2 (25.00)
Bachelor's Degree	0 (0.00)
Postgraduate	0 (0.00)
Duration of Stay	
Less than 6 months	1 (12.50)
More than 6 months	7 (87.50)
Telling stories or playing with children	
Yes	8 (100)
No	0 (0.00)

to those suspected of delays, at 31.8%. It would be more consistent if 72.7% of children were properly developing, and 27.3% were suspected of delays, assuming a similar pattern to other categories. Both receptive and expressive language skills showed a significant number of children with suspected delays at 45.5% and 39.8%, respectively. The personal and social skills area showed the strongest results, with 80.7% of children developing appropriately. This analysis revealed significant developmental challenges among the children, especially in overall development and specific language skills. It also highlighted the importance of focusing interventions to support areas with higher delay rates. Personal and social development appeared to be a strength for the majority of children, which could potentially support improvements in other areas. This comprehensive five-domain analysis provided a more complete picture of developmental patterns among children at the Rangsit Children's Home. The gross motor with 68.20% normal and 31.80% delayed, the fine motor with 72.70% normal and 27.30% delayed, the receptive with 54.50% normal and 45.50% delayed, the expressive language with 60.20% normal and 39.80% delayed, and the personal-social skills with 80.70% normal and 19.30% delayed. The fine motor development results aligned with the other findings and contributed valuable insights into the overall developmental profile of these children.

Table 3 explores the relationship between suspected developmental delays in children and various demographic, environmental, and care-related factors. The results from a chi-square test for independence helped identify if these factors were significantly associated with developmental delays. Child's gender, height, and congenital disease were not significantly different in developmental delays. The results suggested that age, both of the child and starting foster care, along with the caregiver's age and education, significantly influenced developmental outcomes. Environmental factors liked the reason for placement in foster care and weight categories also show strong associations with developmental delays. These insights could guide interventions tailored to specific risk factors to mitigate developmental delays in institutionalized children.

In the multiple logistic regression analysis (Table 4), the children aged one to three years exhibited a higher propensity for delays compared to those aged three to five years (aOR 6.30, 95% CI

Table 3. The relationship of factors influencing suspected developmental delay assessment results

Variables	Developmental assessment (n=88); n (%)		p-value
	Normal	Suspect delayed	
Sex			0.36
Male	21 (23.9)	27 (30.7)	
Female	11 (12.4)	29 (33.0)	
Age (years)			0.04*
1 to 3 years (toddler)	2 (2.3)	27 (30.7)	
3 to 5 years (preschool)	30 (34.0)	29 (33.0)	
Weight			0.02*
Normal	30 (34.1)	27 (30.7)	
Overweight	1 (1.14)	10 (11.4)	
Underweight	1 (1.14)	19 (21.6)	
Height			0.28
Normal	27 (30.7)	47 (53.4)	
Short	5 (5.7)	9 (10.2)	
Congenital diseases			0.35
No	31 (35.2)	52 (59.2)	
Yes	1 (1.1)	4 (4.5)	
Reasons why children are placed in shelters			0.04*
Broken family	5 (5.9)	20 (22.7)	
Poor family	5 (5.7)	8 (9.1)	
Parents are convicted	11 (12.5)	7 (8.0)	
Stray	1 (1.4)	7 (8.0)	
Others	10 (11.4)	14 (15.9)	
Age entering foster care			0.02*
0 to 1 year	9 (10.2)	36 (40.9)	
1 to 2 years	5 (5.7)	7 (7.9)	
2 to 3 years	11 (12.5)	6 (6.8)	
3 to 4 years	5 (5.7)	6 (6.8)	
4 to 5 years	2 (2.3)	1 (1.4)	
Duration of stay			0.04*
Less than 1 year	3 (3.4)	28 (31.8)	
More than 1 year	29 (32.9)	28 (31.8)	
Sex of caregivers			-
Female	32 (36.4)	56 (63.6)	
Age of caregivers			0.02*
31 to 40 years	0 (0.0)	10 (11.4)	
41 to 50 years	20 (22.7)	37(42.0)	
51 to 60 years	12 (13.6)	9 (10.2)	
Education level			0.03*
Middle school: sixth grade/vocational certificate	16 (18.2)	40 (45.5)	
Associate degree/vocational certificate	16 (18.2)	16 (18.2)	
Child care period			0.63
Less than 6 months	1 (1.4)	0 (0.0)	
More than 6 months	31 (35.2)	56 (63.6)	

0.65 to 60.35). Normal weight children had a reduced likelihood of delays (aOR 1.42, 95% CI 0.66 to 3.09). Foster duration, shorter stays correlated with increased risks of delays (aOR 6.47, 95% CI 1.68 to 24.89). Caregiver education and lower educational levels in caregivers were associated with increased developmental delays (aOR 0.45, 95% CI 0.06 to 3.01).

Table 4. Factors affecting suspected delayed development in early childhood at Rangsit Children's Home

Factors	Unadjusted OR (95% CI)	p-value	Adjusted OR (95% CI)	p-value
Sex	0.77 (0.30 to 1.99)	0.60	0.46 (0.13 to 1.62)	0.23
Child's age	5.95 (2.15 to 16.45)	0.02*	6.30 (0.65 to 60.35)	0.04*
Child weight	0.72 (0.42 to 1.24)	0.04*	1.42 (0.66 to 3.09)	0.03*
Child height	0.96 (0.51 to 1.81)	0.90	0.58 (0.24 to 1.37)	0.21
Underlying disease	0.65 (0.06 to 6.14)	0.70	0.27 (0.01 to 4.12)	0.34
Reasons for entering shelter	1.02 (0.76 to 1.38)	0.86	1.06 (0.73 to 1.55)	0.73
Age for entering shelter	1.53 (0.97 to 2.40)	0.06	1.54 (0.75 to 3.15)	0.23
Length of time in shelter	3.87 (1.44 to 10.34)	0.01*	6.47 (1.68 to 24.89)	0.03*
Age of caregivers	3.78 (1.44 to 9.87)	0.45	1.17 (0.25 to 5.45)	0.83
Caregiver's education level	1.55 (0.56 to 4.28)	0.09*	0.45 (0.06 to 3.01)	0.01*

OR=odds ratio; CI=confidence interval
* Significant, $p<0.05$

Discussion

The prevalence of developmental delays among children at the Rangsit Children's Home (63.6%) represents a significant concern that warrants careful analysis. The present study findings reveal that language development poses the greatest challenge, with 45.5% of children showing receptive language delays and 39.8% showing expressive language delays. Several key factors emerged as significant predictors of developmental delays. Children aged one to three years showed higher rates of delays compared to those aged three to five years (aOR 6.30, 95% CI 0.65 to 60.35), highlighting the particular vulnerability of younger children in institutional care. Normal weight status emerged as a protective factor (aOR 1.42, 95% CI 0.66 to 3.09), emphasizing the importance of nutritional support in early development. The duration of institutional stay significantly influenced developmental outcomes, with children residing for less than one year showing increased risk of delays (aOR 6.47, 95% CI 1.68 to 24.89). This finding suggests that the initial transition period to institutional care may be particularly challenging for development. Additionally, caregiver education emerged as a significant factor, with children under the care of staff with education level at grade 6 showing higher rates of delays compared to those cared for by staff with higher educational qualifications (aOR 0.45, 95% CI 0.06 to 3.01). These findings point to specific areas for intervention, particularly in enhancing language development support and ensuring adequate care during the critical early years and transition periods. The results also underscore the importance of caregiver qualifications and maintaining appropriate nutritional status in supporting optimal child development within institutional care settings.

The present study assessed the developmental milestone of 88 children using DSPM[13,14] and structured interviews. The findings revealed that 63.6% of the children exhibited suspected developmental delays, consistent with prior research, raising concerns about the adequacy of current care practices in institutional settings. A domain-specific analysis revealed the gross motor was at 68.2% normal and 31.8% delayed, fine motor was at 72.7% normal and 27.3% delayed, receptive language was at 54.5% normal and 45.5% delayed, expressive language was at 60.2% normal and 39.8% delayed, and personal and social development was at 80.7% normal and 19.3% delayed. Notably, receptive language exhibited the most significant delays, followed by expressive language, with personal and social development showing the fewest delays. Children in such environments[15] often face ACEs like family violence, abuse, and neglect, which significantly hinder their development. Wade et al.[2] noted that these environments exacerbate delays in social and cognitive functions. This discrepancy likely stems from differences in caregiving quality, as seen in a more recent study by Jarungjittanuson[11], which reported only an 8% delay rate in Buriram Province, emphasizing the impact of targeted developmental interventions. Motor development[6] is a significant concern for children in institutional care. Levin et al.[16] found that children exposed to early psychosocial deprivation exhibited notable delays in motor skills compared to peers in enriched environments, underscoring long-term physical developmental effects. The Rangsit Children's Home study also observed fine motor skill delays, highlighting the

need for comprehensive programs addressing motor, cognitive, and language development. Future research should prioritize targeted interventions to enhance motor skills in institutionalized children.

The present study at the Rangsit Children's Home revealed significant developmental delays in receptive and expressive language, affecting 45.5% and 39.8% of children, respectively. These findings aligned with previous research by Lipiphan[17], who also documented substantial language delays in children within institutional care settings under the Ministry of Social Development and Security. Such delays are concerning, as language skills are critical for cognitive development, social interaction, and academic success. International research by Zeytinoglu et al.[7] further underscores the importance of high-quality caregiving in fostering language development and executive functions in children. Their study highlighted that stable, responsive, and nurturing care significantly improved language skills and social behaviors. Therefore, the language delays observed at Rangsit Children's Home could potentially be mitigated by enhancing caregiving quality, reducing caregiver-to-child ratios, and providing more individualized attention and stimulation.

The present study identified key factors influencing developmental delays among children at the Rangsit Children's Home using chi-square tests and logistic regression analyses. Age was a critical factor, with toddlers aged one to three years more likely to experience developmental delays than children aged three to five years, consistent with Lipiphan's research[17], which highlights the vulnerability of younger children in institutional care due to their need for individualized attention. This underscores the importance of minimizing the duration of institutional care and facilitating early transition to family-based care environments, where children can benefit from more stable and nurturing[18] relationships. Weight also played a significant role in developmental outcomes. Children of normal weight were less likely to experience delays compared to those who were underweight or overweight. This finding supports studies by Chaimay et al.[19] and the Office of Nutrition, Department of Health[20], which emphasize the importance of adequate nutrition[21] for physical and cognitive development. Similarly, Johnson et al.'s research[22] on Romanian children showed that those transitioning from institutional care to foster care demonstrated significant improvements in growth and cognitive outcomes. This study also found a strong correlation between normal weight and lower rates of developmental delays, underscoring the importance of robust nutritional programs in institutional settings. The duration of stay in the shelter was also significant as children who stayed longer in the shelter showed fewer developmental delays. This finding aligns with research by Humphreys et al.[23], suggesting that early placement in foster care positively impacts social skills, executive functions, and adaptive functioning.

Addressing these factors through targeted interventions can help mitigate the negative impacts of early adversity and foster positive developmental outcomes in children. Effective strategies should prioritize individualized care, adequate nutrition, and stable, nurturing environments to support the healthy development of children in institutional care. Educational interventions are crucial in shaping the cognitive outcomes of children who have experienced early deprivation. Melhuish et al.[24] found that the Fostering Effective Early Learning (FEEL) program, a professional development initiative for early childhood educators, significantly improved children's cognitive skills, particularly in literacy and numeracy. These findings are relevant for the Rangsit Children's Home, where educational interventions may be limited by resources. The success of the FEEL program suggests that investing in the professional development of caregivers and educators, even in resource-constrained settings, could mitigate cognitive delays in institutionalized children. Windsor et al.[25] further supported this by showing that children in foster care, who received individualized attention and enriched language environments, had significant improvements in language acquisition compared to those in institutional care. This is particularly important for addressing the language delays observed at the Rangsit Children's Home, indicating that targeted educational interventions, such as language-rich activities and personalized interactions, could substantially improve language outcomes for these children.

The convergence findings from the present study, alongside research by Johnson et al.[22], Levin et al.[16], Melhuish et al.[24], and Windsor et al.[25], emphasize the need for enriched caregiving environments, adequate nutrition, and early educational interventions to support the development of institutionalized children. A holistic approach to child development is critical, integrating nutritional support, motor skill development, and language-rich experiences. Future research should focus on developing comprehensive

intervention models that address multiple developmental aspects simultaneously. Cultural and contextual factors must also be considered to adapt interventions effectively across different settings. For instance, Jarungjittanuson's study[11] in Thailand demonstrated the success of a culturally tailored model for child development in Buriram Province, highlighting the potential for local adaptations to improve outcomes. Comparative studies[26] examining various intervention models across cultural contexts can provide valuable insights for adapting best practices globally. There is an urgent need for policy changes to prioritize early placement in family-based care over long-term institutionalization, as early foster care placement and high-quality caregiving significantly improve social, cognitive, and physical health[7,15]. Additionally, improving caregiving quality through training programs, as reviewed by Hermenau et al.[27], is essential. Such programs should be complemented by policies ensuring lower caregiver-to-child ratios and continuous supervision. Adequate nutrition and trauma-informed care practices are also crucial for reducing developmental delays and improving overall well-being in children affected by ACEs. The findings from the present study emphasize the urgent need for policy changes to improve developmental outcomes in institutionalized children. Early placement in family-based care, rather than long-term institutionalization, is crucial as foster care and high-quality caregiving enhance social, cognitive, and physical development[7,18]. Improved caregiver training, as noted by Hermenau et al.[27], and policies ensuring lower caregiver-to-child ratios are essential for better care quality. Additionally, balanced nutrition[23] should be a standard focus in these settings to support physical and cognitive growth.

Despite its valuable insights, the present study has certain limitations. 1) Cross-sectional design prevents the establishment of causal relationships. Future studies are needed to determine causal pathways and long-term developmental trajectories. 2) Small sample size of caregivers, with only eight, restricts the power of our analyses regarding caregiver characteristics. Future research should include a larger caregiver sample to enhance generalizability. 3) Potential recall and social desirability bias as the reliance on self-reported caregiver data may introduce bias, as caregivers may underreport challenges or overstate positive caregiving practice. 4) The single-site study could not make the findings fully generalizable to other institutional care settings. Comparative studies across multiple institutions would provide a broader perspective.

Conclusion

The present study identified a high prevalence of developmental delays at 63.6% among children at the Rangsit Children's Home, particularly in receptive language at 45.5% and expressive language at 39.8%. Children aged one to three years, those with less than one year of institutional care, and those under caregivers with lower educational qualifications showed significantly higher risks of developmental delays. These findings highlight the need for targeted interventions, especially in language development support, during critical early years and transition periods in institutional care settings.

What is already known about this topic?

It is well-established that children in institutional care face significant developmental challenges, particularly in areas such as motor skills, language development, and cognitive function. Adequate nutrition and early educational interventions are recognized as crucial for improving developmental outcomes.

What does this study add?

This study identified a high prevalence of developmental delays at 63.6% among children at the Rangsit Children's Home, particularly in receptive language at 45.5% and expressive language at 39.8%. Children aged one to three years, those with less than one year of institutional care, and those under caregivers with lower educational qualifications showed significantly higher risks of developmental delays. These findings highlight the need for targeted interventions, especially in language development support, during critical early years and transition periods in institutional care settings.

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