ASSESSMENT RESULTS OF DEVELOPMENT OF CHILDREN 3 – 5 YEARS OLD BY THE EAST ASIA-PACIFIC EARLY CHILD DEVELOPMENT SCALES (EAP – ECDS)

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***Abstract*— To obtain authentic evidence for developing and adjusting policies, strategies, programs, and action plans that meet the requirements of the children's overall development in the new situation, the Ministry of Education and Training (MOET) assessed children aged 3 to 5 years old, in conjunction with interviews with parents and caregivers by the EAP - ECDS. The results show the unequal development of children from different demographic groups in 7 domains, weight, and height, using descriptive statistical methods, then comparing and assessing the difference in scores across groups of children. The findings indicate that it is necessary to consider the government and communities' policies and impacts on educational institutions and children's education to make it more suitable for disadvantaged groups such as children in rural areas, mountainous areas, rural areas, and ethnic minority children. Additionally, the program's material for children's care and education should be more appropriate for children aged 3-5 years, particularly 5-year-old children preparing to enter the first grade.**

Keywords: Children 3 – 5 years old, assessment, early childhood development, EAP – ECDS scale

I. INTRODUCTION

Early childhood development (ECD) ranges from infancy to 6 years old. A child's development is holistic: cognitive, language, physical and social-emotional development all work together. It depends on the context of families, communities, regions, nations, and the global environment. Each environment plays a critical role in affecting young children's well-being. Research is increasingly demonstrating that investments in education provide significant benefits to children, families, and society as a whole, accelerating economic growth and promoting opportunity over time (Heckman et al., 2010; Kautz & Heckman, 2014, USA 2015). Therefore, it is necessary to make and implement policies and laws, programs and services, family environments, and child well-being to meet their needs.

When researching the quality of ECE, the global researchers agree that this term is difficult to define due to its complex nature and multiple meanings. Da Silva and Wise (2006) argue that the quality of

ECE is the child's development in the traditional view. Brunsek et al. (2020), Cassidy et al. (2005), and Vandell & Wolfe (2000), among others, classify quality in ECE as process quality or structural quality. Structural quality factors are marginal conditions related to organizing early childhood education and care. They include the curriculum directing ECE, personnel training, working time structures, the structure and size of child groups, and the facilities. Process-related factors of quality describe the unit's pedagogical operating culture, directly linked to the child's experiences. Process-related factors include interactive relationships between the children, adults, guardians, and personnel, as well as pedagogical activity in child groups. Other process-related factors are leadership, planning, implementation, evaluation, and development of pedagogy and the different parties' experiences of participation. ECE quality is composed of the collective impact of these factors, which should be regarded as mutually complementary. They are realized at the national and local level and the level of pedagogical activity. Sylva et al. (2012), in research on Effective Support for Early Childhood Education (EPPE) in the United Kingdom, has identified qualitative aspects of quality of education including structural quality (facilities and human resources); process quality (education and care for children day by day) and outcomes (long-term outcomes for children). Figure 1 explains the structural quality and process quality that leads to many social and learning outcomes of children:

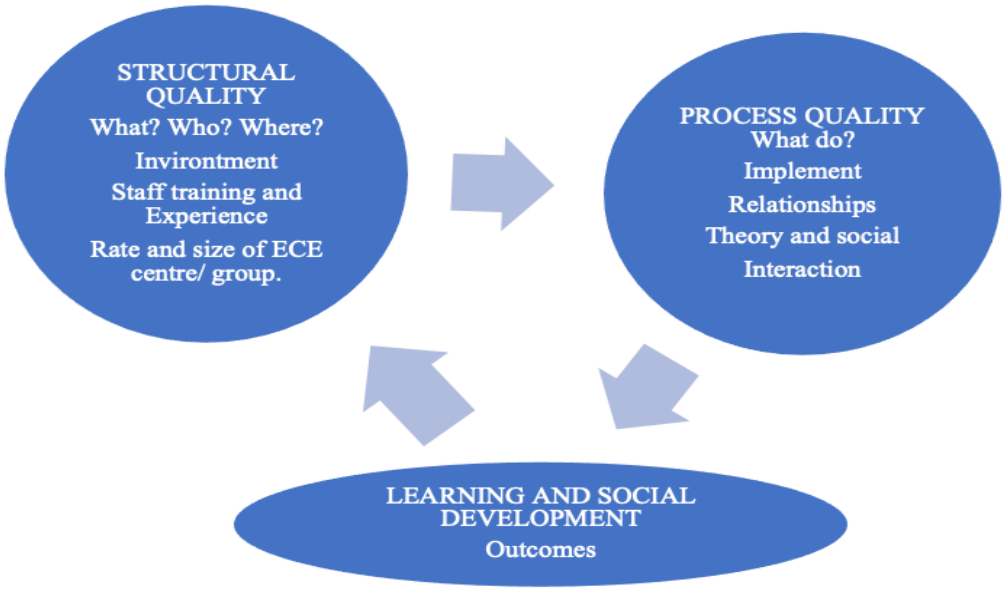

Figure 1. The relationship of the structural quality, the process quality, the developmental outcomes

The EPPE study shows a clear relationship between the quality of early childhood service delivery and child development outcomes. In which, measures of input quality are structural quality and process quality, and output quality measures are outcomes of children's development.

In VietNam, governments and other key stakeholders increasingly recognize the importance of ECD and laying the foundations of ECE through quality ECD programs. Education Law stipulates that ECE is the first level of education in the national education system, lays the foundation for the comprehensive development of Vietnamese, nurtures, cares for, and educates children from 3 months to 6 years old. The objective of ECE is determined to develop children comprehensively on physical, cognitive, language, socio-emotional and aesthetic, to form the first elements of personality, to prepare children to enter first grade (Article 23, Law. 43/2019/QH14). Furthermore, the analysis report of the education sector built-in 2020 shows that economic development has led to face to rapid urban growth, sharply increasing the number of migrants, creating significant pressure on capital mobilization for building infrastructure, creating jobs, accommodation, health care, education as well as addressing inequality, rich-poor disparity, and urban environmental pollution. In particular, hot growth leads to disparities in the percentage of children from ethnic groups, different regions

accessing ECE services (MOET,2020). Results of the assessment of school readiness for the period 2012 – 2016 in 5 areas 1) Health and fitness; 2) Social skills development; 3) Social skills; 4) Language and cognition; 5) Communication and Knowledge show that groups of disadvantaged children, for example, children in mountainous areas, islands, and children of ethnic minorities are the weak, vulnerable groups, and lacking in one or more developmental domains.
In addition, the analysis report shows that one of the reasons for the difficulty in evidence-based policy-making for ECE is the lack of the reliability tool to assess the ECD (MOET,2020). One of the tools used to assess the development of Vietnamese children is the EDI Toolkit developed by the Offord Center for Early Childhood Studies at Mc Maser University, Canada. However, the toolkit is only used when implementing the project "Strengthening school readiness for preschool children" from 2012 to 2016 with technical and financial support from World Bank. Currently, the EDI toolkit is hardly used.

Hence, since 2017, the MOET conducted an adaptation study and used EAP – ECDS (the Vietnamese version). This is a regional assessment program for early learning and development that is developed and approved by the East Asia-Pacific Regional Network for Early Childhood (ARNEC) in collaboration with the University of Hong Kong (HKU), with support from United Nation Children's Fund, the East Asia Pacìic regional Office (UNICEF EAPRO) and the Open Society Foundation (OSF) (Rao et al., 2019). The EAP - ECDS contains a set of tools to assess the development of 3 - to 5-year-old children in 7 domains, including (1) Cognitive development, (2) Socio-Emotional Development, (3) Motor Development, (4) Language and Emergent Literacy, (5) Health, Hygiene, and Safety, (6) Cultural Knowledge and Participation, (7) Approaches to Learning. There are also two criterion measures of weight and height, as well as questionnaires for parents. The test results have confirmed the reliability and high value of the test in assessing the comprehensive development of children aged 3 to 5 years old. This allowed MOET to measure the development of children who represent for advantage and disadvantage geographical and economic regions, different groups of children across the country (by age, sex, ethnicity, speaking language, etc.), and to account for important contextual factors of the children's families, for example, educational level or job of the mother, father, and the socio-economic status of the household. Therefore, proposing recommendations to develop and improve policies more in line with reality.

II. METHODOLOGY

In order to obtain the high-reliability results, assessing the development of children aged 3 to 5 years old by EAP - ECDS Scale in groups of subjects requires a collective sampling method, a data collection method, and a data analysis method that maintain scientific rigor and objectivity.

Sampling method: The evaluation sample is 895 children and their parents (or caregivers) at the selected preschools with the randomized principle and stratification to ensure the prescribed number of sample sizes, balance the proportions of children in the population groups representing different regions; places of residence (urban and rural); gender (boys, girls); ethnic groups (Kinh, ethnic minorities); children aged from 3, 4, 5 years old. Specifically, the chosen provinces are Hoa Binh representing the Northern Mountains; Hai Phong representing the Red River Delta; Kon Tum, representing the Central provinces, Central Highlands; and Dong Thap representing the Mekong Delta region. The research team selected 02 types of preschools in each province and city: 01 standard/urban preschool and 01 low-quality/rural preschool. At each school, the selected children are from 3 to 5 years old (3 years old 0 months 0 days to 5 years old 11 months 29 days). The study sample included 894 children. In which, there are 67.2% Kinh children; 32.8% of ethnic minority children; 48.7% boys, 51.3% girls; 43.5% urban children, 56.5% rural children; 100% of children speak the language at school is Vietnamese. The details are described in Table 1.

Table 1. Sample description of children 3-5 years old

Provinces		Sample	Ethnic groups		Gender		Places of residence		Speaking Language at school
			Kinh	Ethnic minorities	Boys	Girls	Urban	Rural	Vietnamese
Hoa Binh	N	219	90	129	105	114	109	110	219
	%	100	41.1	58.9	47.9	52.1	49.8	50.2	100.0
Kon Tum	N	235	71	164	115	120	61	174	235
	%	100	30.2	69.8	48.9	51.1	26.0	74.0	100.0
Hai Phong	N	218	218	0	105	113	110	108	218
	%	100	100.0	0.0	48.2	51.8	50.5	49.5	100.0
Đong Thap	N	222	222	0	110	112	109	113	222
	%	100	100.0	0.0	49.5	50.5	49.1	50.9	100.0
Total	N	**894**	**601**	**293**	**435**	**459**	**389**	**505**	**894**
	%	100	67.2	32.8	48.7	51.3	43.5	56.5	100.0

Data collection method: Individuals with experience or training in early childhood education administered the EAP-ECDS to the children. Before adopting the Scales as a standardized measure, assessors were extensively conversant with the test materials and practiced giving and scoring the Scales under the supervision of an experienced assessor. The assessor conducted the test and rated the child's performance with the supervisor before administering any test. Prior to formal testing, there was at least 85% agreement (inter-observer reliability) between the assessor and the supervisor, as well as dependability between assessors.

The evaluator assessed children directly using a measuring scale consisting of 33 items that measured 7 development domains, weight, and height. The total administration time was between 45 and 60 minutes, depending on the child's age, ability, temperament, mood, and rapport with the assessor. The items were given out in a specific order. The results of the child's measurements are noted on the scorecard.

In addition to the EAP-ECDS' direct assessment of children's development, data was obtained from each child's caregiver via a parent 70 item survey. Family background (parental education, occupation, and wealth), children's engagement in early childhood education programs, children's health and hygiene habits, and information about the home learning environment were gathered. Caregivers were also asked to judge their child's performance across the EAP-seven ECDS's domains. However, in this situation, both direct assessment and parent - report data were collected to support the validity of the EAP-ECDS further.

Data analysis method: All obtained data was verified, entered, cleared, and saved using SPSS 22.0 software. Before analyzing the data results, inappropriate data such as over-age children and results that lack data (parent interviews without measuring children, measuring children without interviewing parents, measuring children without interviewing parents, measuring children without interviewing parents and measuring children) were excluded. The following are the primary analytical techniques employed:

- According to the child's demographic variables, descriptive statistics seek to provide an overview of the child's development status in 7 domains and the EAP-ECDS rating scale:

Average score – For the EAP-ECDS, all questions about children's behavior/habits on a 5-point scale will be assigned a score ranging from 1 - well below/never to 5 - well above/always. The average score will then be calculated;

Standard Deviation – The standard deviation is a descriptive statistic used to measure the dispersion of a tabulated data set;

Percentage – For yes/no, or/and questions about items the child can or cannot do;

T-test – Testing the mean difference between qualitative variables, sig T-Test value 0.05 concluded that there is a statistically significant difference in children's scores/behavior, whereas sig T-Test value > 0.05 concluded that there is no statistically significant difference in children's scores/behavior. Independent Sample Test T-Test applies to the mean test when the qualitative variable has 2 values (e.g., male and female gender); ANOVA test helps compare the mean of 3 or more groups);

Determine the correlation coefficient (Pearson) between each domain and different demographic variables to identify factors that impact or do not affect the children's development domains.

Multiple linear regression was used to assess the relationship between demographic variables (gender, ethnicity, place of residence, family economic conditions, parents' education level, height and weight of the child...) and the child's score according to the EAP-ECDS rating scale and from there to predict child's development scores.

III. RESULTS AND DISCUSSION

III.1 *General development of children*

The results revealed that the overall development of children in different groups of subjects differed significantly, except for the group of children who spoke their mother tongue at home and the group of children who spoke two languages (including their mother tongue and other common languages).
The overall development of children living in different provinces in different regions has statistically significant differences. In particular, children in urban areas have better development than children in rural and mountainous areas.
The mean score of the total EAP - ECDS scores between children in the provinces have a statistically significant difference (sig = 0.000). In which the average score of children in Hai Phong is the highest (mean = 49.15 points), Dong Thap (mean = 49.07 points), the average score of children in Kon Tum is the lowest (mean = 34.21 points), the average score of children in Kon Tum is the lowest (mean = 34.21 points). The average score of children in urban areas (mean = 50.24 points) is higher than that of children in rural areas (mean = 39.43 points).
The general development of children increases with age is an inevitable development trend. Younger children have a lower mean score than older children, which is statistically significant (sig = 0.000). The mean total EAP - ECDS scores of the three youngest children in each age group are as follows: 3 years old (mean = 28.65 points), 4 years old (mean = 44.97 points), and 5 years old (mean = 59.04 points).
There is a statistically significant difference in the general development of boys and girls (sig.0.05). Girls, in particular, tend to develop faster than boys. Girls had a higher mean overall EAP – ECDS score (mean = 46.22 points) than males (mean = 41.93 points).
The overall development of Kinh children is better than that of ethnic minority children, and the difference is statistically significant (sig = 0.000). The average point of total EAP - ECDS score of Kinh children (mean = 50.20 points) is much higher than that of ethnic minority children (mean = 31.68 points) (Figure 2).

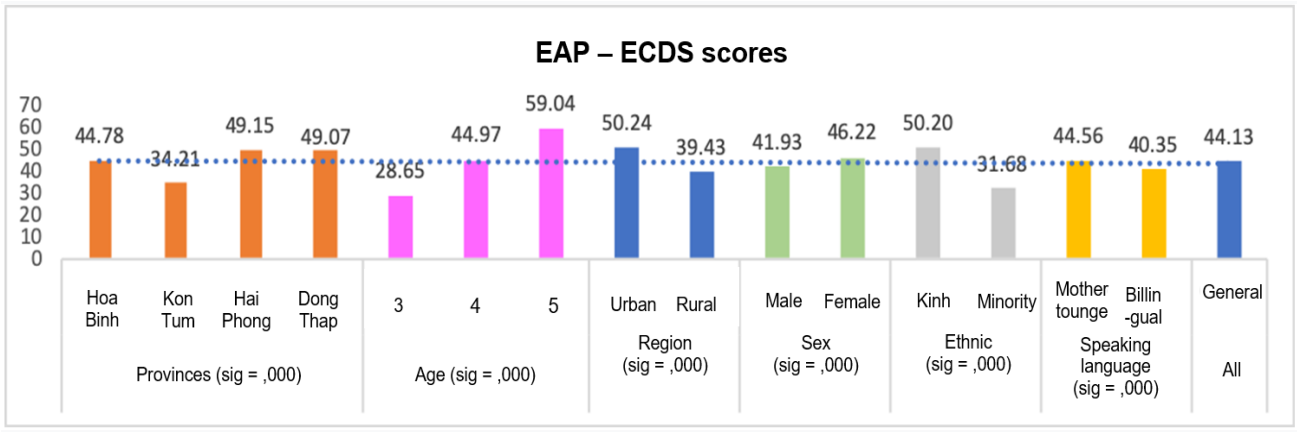

Figure 2. Mean points and differences in scores of EAP-ECDS

III.2 *Children's ability in all developmental domains*

III.2.1 *Cognitive development*

Most children have difficulty with counting to 10 (item of putting 15 blocks on a piece of paper and item of putting 29 blocks on a piece of paper), adding and subtracting, naming 4 to 6 shapes, and organizing them into groups based on size, shape, and color. Over 80% of 5-year-olds, 90% of 3-year-olds and 40% of 4-year-olds, and 90% of children in rural and urban regions do not meet the requirements for these items.

Children in different groups of subjects were significantly different (sig. < 0.05), except for the group of children by sex (boys, girls), there was no significant difference (sig. = 0.442 > 0.05). More precisely, the average cognitive development score of children in Hai Phong, Dong Thap and Hoa Binh is higher than that of children in Kon Tum; Children in urban areas, children of Kinh ethnic group, children who speak their mother tongue at home are higher than children in rural areas, children of ethnic minorities, children who speak two languages at home. The mean score of girls is higher than boys, but there is no significant difference (sig. = 0.442 > 0.05) (Figure 3).

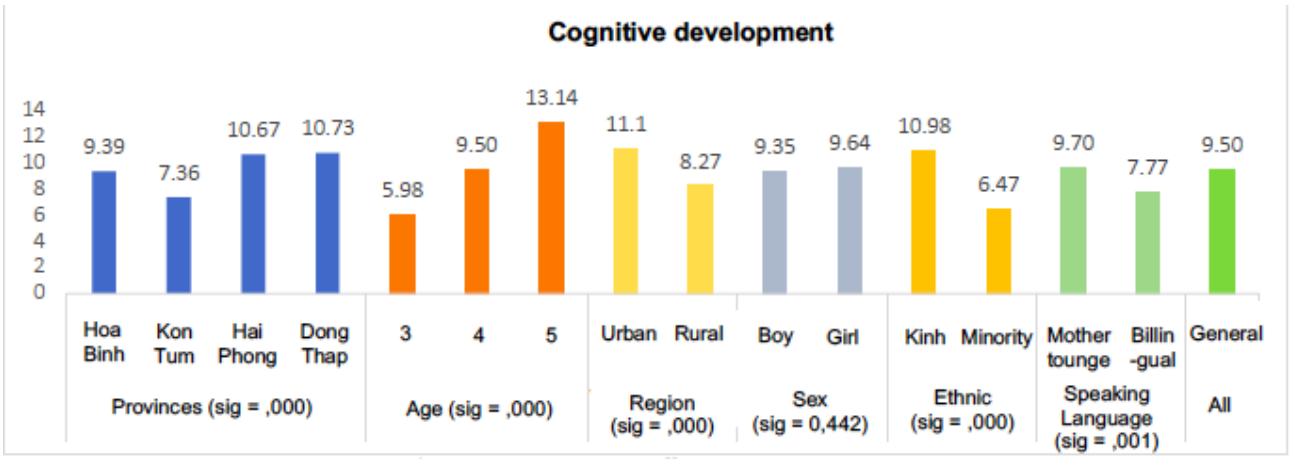

Figure 3. Means point and differences in cognitive development

Thus, in the field of cognitive development, children's knowledge of numbers, shapes, addition, subtraction (addition, subtraction), and pattern recognition and arrangement is still low, and there is a clear difference between groups of children based on region, place of residence, age, and ethnicity.

III.2.2 *Socio-emotional development*

Only 45.4% of children who perform the entire sample have good behavior towards adults, show respect to the elderly, and know to ask for help in the situation of losing their mother (46.1%). The item of realizing what makes them angry accounted for 28.6%. Only 44.6% of children know how to behave in problem-solving (competitive). Significantly, the indicator shows that the rate of children can ask for help from adults, actively interact with friends and solve problems at a shallow rate: from 20% to 25% of children in Kon Tum, over 45% of children in Hai Phong, Hoa Binh, and Dong Thap provinces; 50% - 65% of urban children, less than 50% of rural children; less than 50% of boy and girl children; 50% - 80% of Kinh children and only 20-46% of ethnic minority children.
Children in different groups also have a statistically significant difference (sig. < 0.00), except for the group of children who use their mother tongue and speak two languages (Sig = 0.449). In which, the average score of children in Kon Tum (mean = 4.57) is two times lower than that of other provinces Hoa Binh (mean = 7.69), Hai Phong (mean = 8.59), and Dong Thap (mean = 9.48). The average score of urban children (mean = 9.39), Kinh children (mean = 9.25) is higher than that of the other group of children. The average score of children who speak their mother tongue (mean = 7.58) is higher than children who speak two languages at home (mean = 7.13), but there is no significant difference (Figure 4).

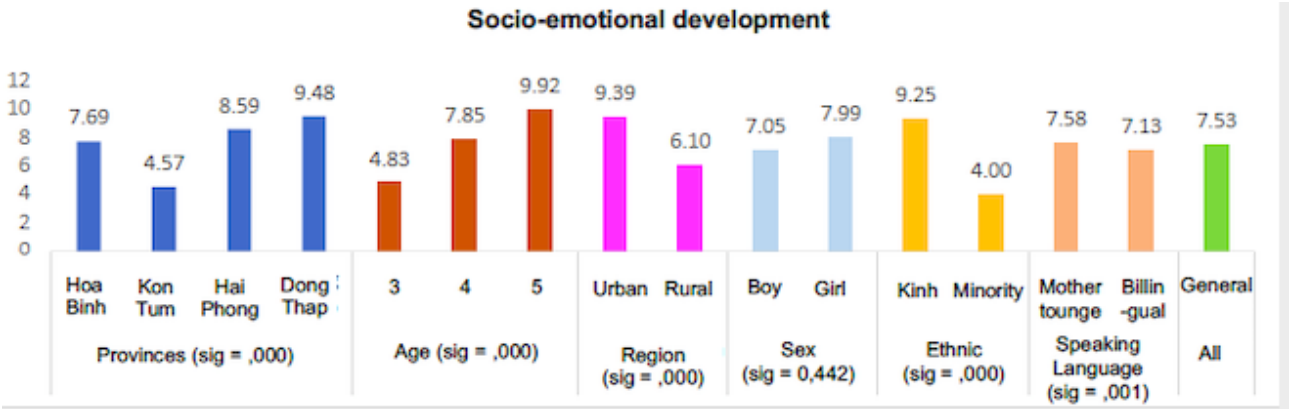

Figure 4. Means point and differences in the socio-emotional development

Thus, in socio-emotional development, children can recognize emotions (happy, sad). However, there is a clear difference between groups of children by region, living place, age, and ethnicity in recognizing what makes them angry and how to deal with situations (conflicts, lost mothers, broken hands), fighting, fighting, losing toys, etc. These items are difficult for most children.

III.2.3 *Motor development*

Children's gross motor development (balance while walking on a strip line, walking with a full glass of water, catching a ball), fine motor development (filling a pitcher), and self-care abilities (drinking, eating independently) are typically well developed. Over 90% of the evaluated children did well in gross motor skills, fine motor skills, and self-care skills (especially eating skills). However, statistically significant differences exist between children from different regions, children of different ages, rural children, Kinh ethnic and minority ethnic children (sig 0.000). Notably, the average score of children in Kon Tum in this developmental domain is the greatest (mean = 5.31), and there is a difference compared to other provinces in Hoa Binh (mean = 4.96) and Dong Thap (mean = 4.86). On the other hand, children in Hai Phong had the lowest average score (mean = 4.33). In addition, the average score of urban children, Kinh children, is greater than the other group of children. The mean scores of boys and girls, mother tongue children, and bilingual children did not differ significantly (sig = 0.843 and sig = 0.249, greater than 0.05) (Figure 5).

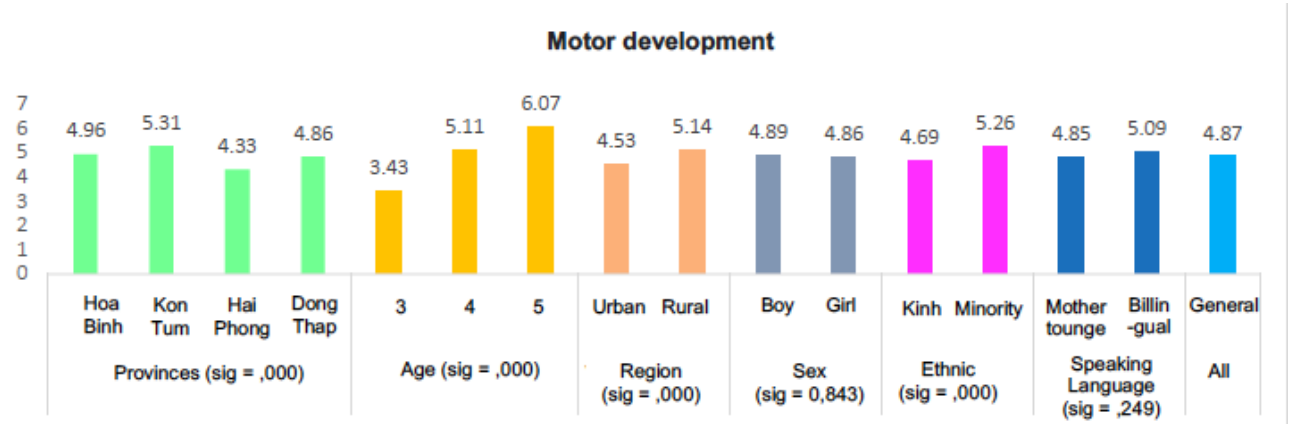

Figure 5. Mean points and differences in motor development averages

In summary, the motor development of most children is good, but we should pay more attention to building this kind of skill for urban children and Kinh children than the rest of the children.

III.2.4 *Language and emergent literacy*

Most children (85%) can express ideas with the help of pictures in a few sentences indicating people, things, or actions. However, only 60% of children can describe events in pictures. The ability to recognize the Vietnamese alphabet is very low (only under 11% of children can recognize two or fewer letters starting from the letter c, d, e, g, a. Only 26.5% of children 5 years old with 14.8% girls and 8.9% boys; 14% Kinh children and 7.4% ethnic minority children; 1.6% children of the whole sample recognized 11-12 letters (of which only 3.4% of 5-year-old children). With the pre-writing skills such as skills to hold a pen, adjust sitting posture, pen, paper, write in line, draw a human figure (with details on face, hands, feet, body) without templates/adults' help is only achieved in the majority of 5-year-old children (about 50-80%), 4-year-old children (only from 15% - less than 50%), 3-year-old children (under 20%); The skills of copying pictures, writing names have a very low rate of children (less than 10% - 30% out of the total number of children).

Except for the group of children who speak their mother tongue at home and the group of children who speak two languages at home (sig = 0.104 > 0.05), the children in the groups have statistically significant differences (sig.< 0.05). The average score of children in Kon Tum (mean = 5.57) was substantially lower than the average scores of children in Hoa Binh (mean = 6.76), Hai Phong (mean = 8.14), and Dong Thap (mean = 7.39). The average score for urban children (mean = 7.75) is greater than that of rural children (mean = 6.31), and females (mean = 7.59) outperform boys (mean = 6.26) and ethnic minority children. Kinh has a higher mean (mean = 7.84) than ethnic minorities (mean = 5.09) (Figure 6).

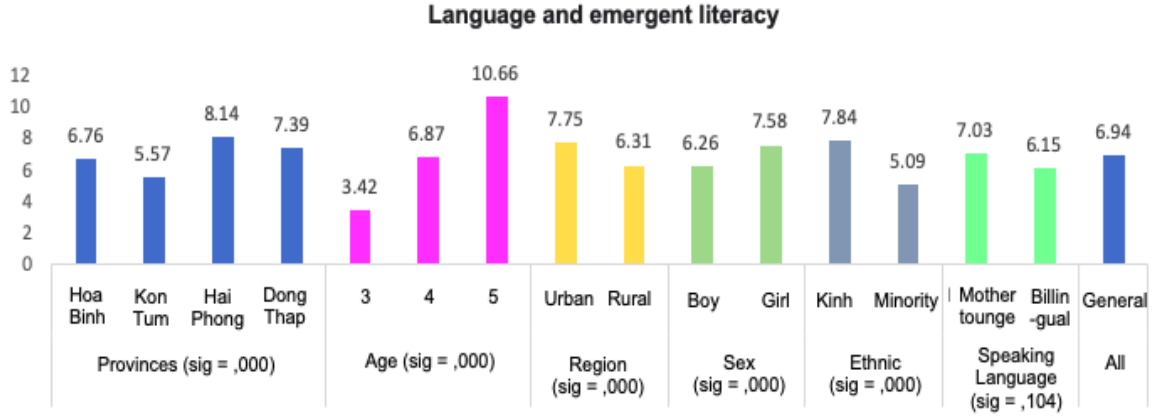

Figure 6. Mean points and differences in mean points of language and emergent literacy

Thus, there is a distinct difference in the target groups in language development based on province, age, living region, gender, and ethnicity. It is worth mentioning that 5-year-old children excel at pre-writing abilities such as holding a pen, changing their sitting posture, writing on paper, and writing in the correct lines. However, the ability to express ideas (talk about events), skills to use money, reading (recognizing alphabet letters from 2 to 12 alphabet letters), pre-writing ability (writing names without templates) are still very limited.

III.2.5 *Health, hygiene, and safety*

Children's outcomes on behaviors such as washing hands after using the toilet, staying away from fire, knowing the human body, and not eating raw, stale food have a statistically significant difference between groups (sig. < 0.05), except for the group of children who speak their mother tongue as their home language and those who speak two languages at home (sig= 0.234>0.05).
The children in Kon Tum have a lower average score (mean = 4.44) than children in Hoa Binh (mean = 7.58), Hai Phong (mean = 8.69), and Dong Thap (mean = 8.08). Furthermore, the mean score of urban children (average = 8.62) is significantly higher than that of rural children (6.01), Kinh children (mean = 8.57) are twice as high as that of ethnic minority children (mean = 8.57), more than double that of ethnic minority children (mean = 4.23), and girls (mean = 7.44) are higher than boys (6.85). The mean score of children who speak their mother tongue at home (TB = 7.20) is higher than that of children who speak two languages at home (mean = 6.70). (Figure 7).

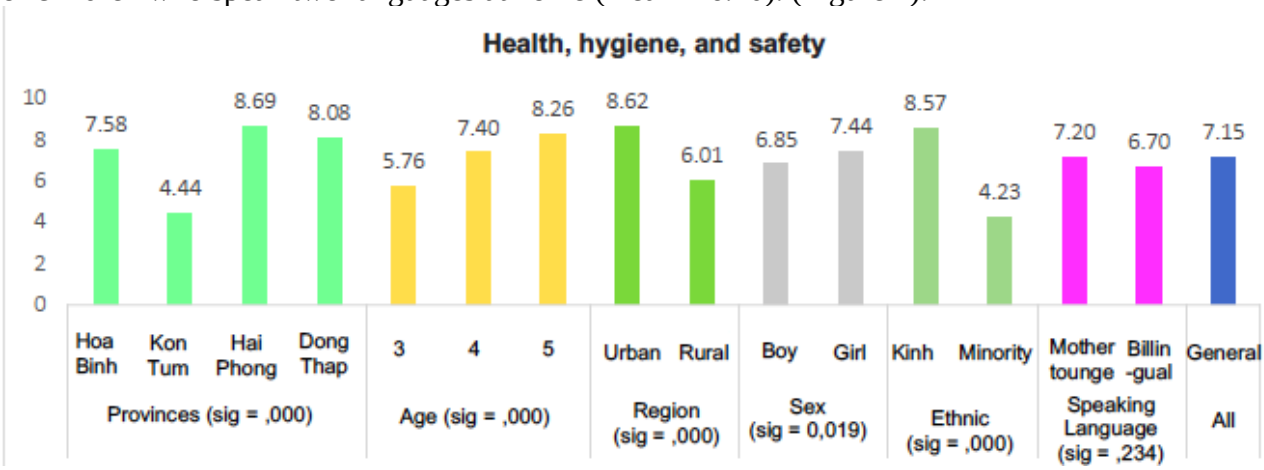

Figure 7. Means point and differences in mean scores in health, hygiene, and safety

III.2.6 *Cultural knowledge and participation*

In cultural knowledge and participation, the majority (80%-90%) of all children participate in singing and clapping to the song's beat or music. However, 76.8% of all children could not name a festival in the community, 93.4% of children could not name another festival. Observation of children's responses showed that most children did not understand the concept of "festival" in the question and did not give a detail related to the festival (food, costumes, music, style, and so on) customs and activities of the festival).

Except for the group of children who speak their mother tongue as their home language and those who speak two languages at home (sig= 0.925>0.05), there are statistically significant differences (sig 0.05). In this regard, the average score of children in Kon Tum (mean = 5.13) is lower and substantially different from the average scores of children in Hoa Binh (mean = 6.12), Hai Phong (mean = 5.94), and Dong Thap (mean = 6.15). Rural children have a lower average score (mean = 5.46) than urban children (mean = 6.29), and boys have a lower average score (mean = 5.27) than girls (mean = 6.34). Ethnic minority children had a lower mean (5.01) than Kinh ethnic children (6.21). (Figure 8).

Thus, educating children to understand the concept of "festival" should be prioritized in the preschool educational program, particularly for the boys and the children from disadvantaged backgrounds such as Kon Tum, rural children, and ethnic minority children.

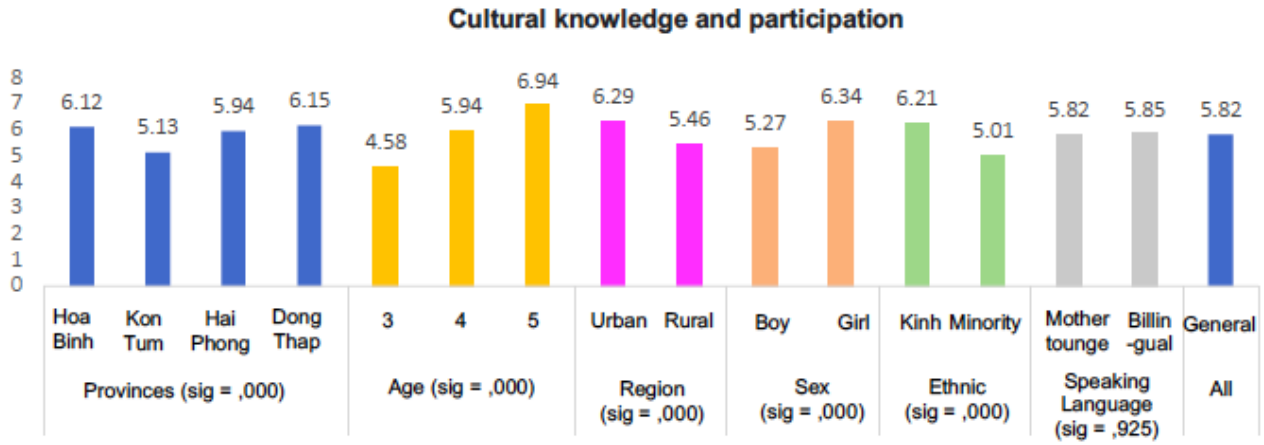

Figure 8. Means point and differences in mean scores of cultural knowledge and participation

III.2.7 *Approaches to learning*

In the area of access to learning: The behaviors of self-correction, response, restraint, and performance of typing tasks also differ between groups of children (sig. < 0.05), except for the criteria of group boys and girls (sig. = 0.537 > 0.05). The children's mean score in the provinces has a statistically significant difference (sig. = 0.000). In which, the average score of children in Kon Tum (mean = 1.84) is lower and significantly different from that of children in Hoa Binh (mean = 2.28), Hai Phong (mean = 2.80), and Dong Thap (mean = 2.38).

The average scores of children in various age groups differ significantly; the 3-year-old children hardly meet the measurement standards in this area (mean = 0.65 < 1 point), whereas 5-year-old children can do the majority of the tested exercises (mean = 4.07). The mean scores of children living in urban and rural regions, Kinh and ethnic minority children, mother tongue-speaking children, and dual-language children differ statistically significantly (sig<0.05). Additionally, urban children (mean = 2.57), females (mean = 2.37), Kinh children (mean = 2.66), and children who speak their mother tongue (mean = 2.39) had better average scores than the other groups of children (Figure 9).

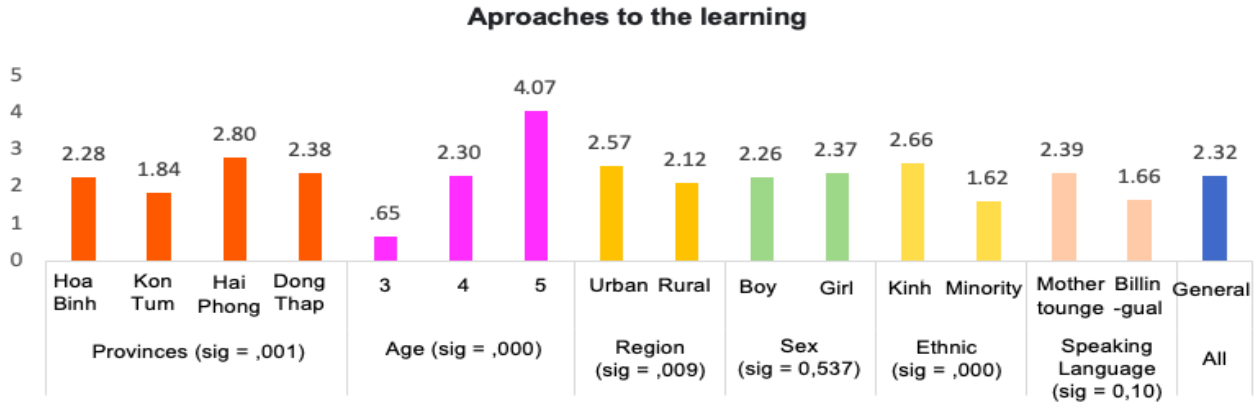

Figure 9. Average scores and differences in the mean score of the approaches to the learning

Thus, 5-year-old children, Kinh children, children who speak their mother tongue, children living in advantageous areas such as Hai Phong provinces or living in urban areas have self-regulating behaviors and respond better to social activities than children in the small age group (3 years old, 4

years old), children in rural areas, ethnic minority children, and children who speak two languages at home.

III.3 *Growth in height and weight*

Average height and weight of children in different provinces, different ages, children living in rural/urban areas, ethnic minority children (Kinh and ethnic minorities), children who speak only one language, Vietnamese, and children who speak both minority language and Vietnamese are obviously different (sig.<0.05). Children's average height and weight in Kon Tum are significantly lower than those in other provinces; rural children's average height and weight are lower than urban children's; ethnic minority children's average height and weight are lower than Kinh ethnic children's; children who speak two languages (minority languages and Vietnamese) have lower average height and weight than children who speak only one mother tongue. The heights of boys and girls were not significantly different (sig. =0.569), but girls' weights were lower than boys', and there was a significant difference (sig. =0.022) (Figures 10 and 11).

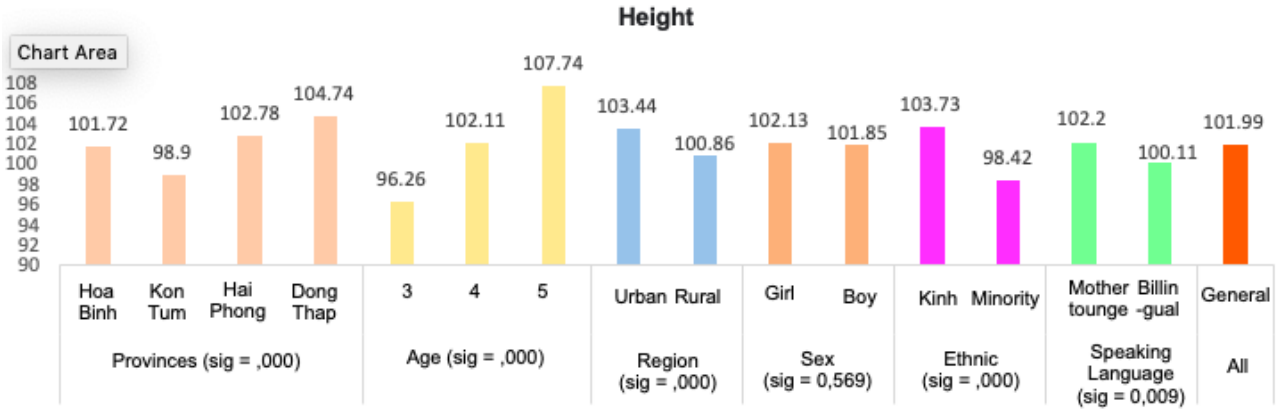

Figure 10. Child's height (cm)

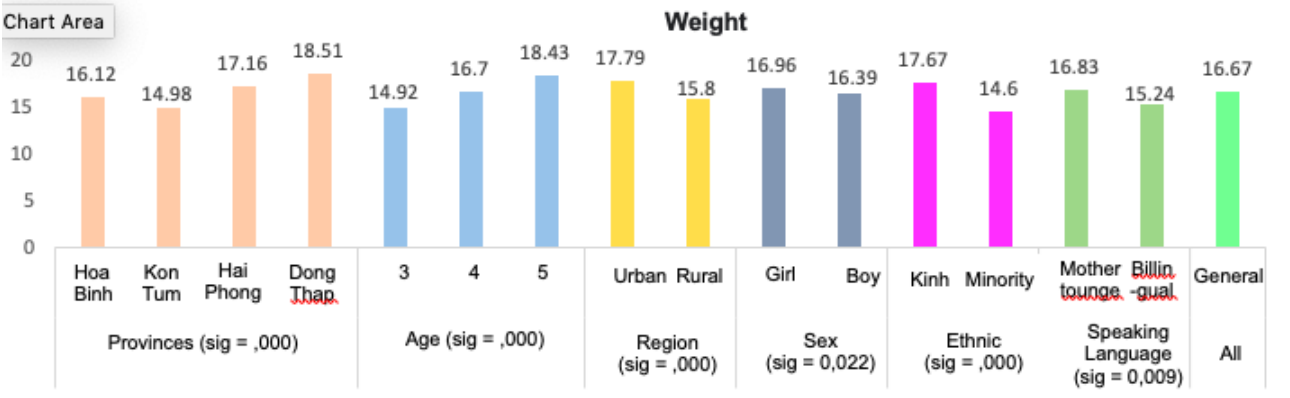

Figure 11. Child's weight (kg)

The graph shows that children living under challenging conditions, such as Kon Tum, rural, and ethnic minority, have a significant difference in weight and height compared to children living in favorable conditions, such as Hai Phong, Dong Tower, urban, and Kinh ethnic.

III.4 *Correlation of children's development with demographic factors, family economic conditions, number of months children attend schools*

The following is the relationship between general development, developmental domains, height, weight, demographic variables, family economic conditions, and the number of months children attend school:

- EAP-ECDS scores, as well as scores in all development domains (except motor development), height, and weight, are positively correlated with the parent's age, education level, number of years the parents attended school, occupations of parents, family economic conditions, and the number of months the child attends school. When parents' education and professional qualifications are high, the family situation is good, and the child attends school at an early age, the EAP-ECDS score will be higher.
- EAP-ECDS scores and scores in all developmental domains (except motor development), height, and weight are negatively correlated with the number of family members and the number of children in the family. Therefore, the research indicated that the larger the number of family members and the number of children, the lower the EAP-ECDS score and the scores in all developmental domains, height, weight, and vice versa.
- In particular, children's motor development scores are adversely linked with factors such as where they live, parental education level, number of years parents attended school, and family economic situations. Children living in rural regions have lower motor development scores when their parents' education is higher, their parents have attended school for a more extended period, and their family's financial situation is good. The child's motor development score, on the other hand, is positively associated with the number of family members and numbers of children in the family, which indicates that the more members and children in the family, the higher the child's motor development score (Table 2).

Table 2. Correlation of children's development with demographic factors and family economic conditions

	Total score of Cognitive development	Total score of Socio-Emotional Development	Total score of Motor Development	Total score of Language and Emergent Literacy	Total score of Health, Hygiene, and Safety	Total score of Cultural Knowledge and Participation	Total score of Approaches to Learning	**Total score of EAP-ECDS**	**Height**	**Weight**
Habitat	-.262**	-.301**	.175**	-.143**	-.340**	-.129**	-.081*	-.255**	-.176**	-.265**
Father's age	.170**	.146**	.019	.143**	.176**	.114**	.123**	.186**	.149**	.104**
Mother's age	.168**	.133**	.091**	.153**	.132**	.115**	.157**	.182**	.161**	.096**
Father's education level	.334**	.318**	-.174**	.205**	.371**	.127**	.147**	.304**	.248**	.264**
Mother's education level	.322**	.342**	-.165**	.201**	.410**	.135**	.155**	.312**	.231**	.269**
Number of years father attended schools	.295**	.298**	-.172**	.182**	.360**	.118**	.112**	.274**	.212**	.233**
Number of years mother attended schools	.274**	.314**	-.197**	.170**	.395**	.118**	.113**	.269**	.191**	.235**
Father's job	.235**	.228**	-.101**	.150**	.253**	.111**	.095**	.212**	.149**	.182**
Mother's job	.238**	.241**	-.080*	.152**	.275**	.098**	.145**	.227**	.175**	.191**
The number of family members	-.128**	-.176**	.086**	-.106**	-.184**	-.024	-.040	-.141**	-.134**	-.141**
The total number of children	-.202**	-.302**	.148**	-.164**	-.345**	-.081*	-.031	-.231**	-.201**	-.236**

Economic condition of the family	.319**	.375**	-.114**	.237**	.461**	.170**	.156**	.350**	.293**	.318**
The number of months the child go to school	.474**	.385**	.331**	.453**	.362**	.293**	.395**	.502**	.483**	.300**

III.5 **Regression of predictors of children's EAP - ECDS scores**

I.4.7.1

Table 3. The regression model predicts mean EAP - ECDS scores of children (R^2 = 0,528)

Factors	Unnormalized coefficients		Normalized coefficients	t	Sig.	VIP
	Beta	Standard error	Beta			
(Constant)	-181.266	9.278		-19.536	.000	
Habitat	2.940	1.131	.069	2.601	.009	1.319
Ethnicity	5.288	1.347	.117	3.926	.000	1.678
Sex	3.439	.995	.081	3.455	.001	1.039
Height in cm	1.925	.115	.660	16.788	.000	2.902
Weight in kg	-.662	.225	-.117	-2.941	.003	2.962

The analysis results of Tables 2 and 3 show that the independent variables can explain the dependent variable (EAP-ECDS score) 52.8%. The value sig < 0.05 shows that the given model is suitable. There is a multicollinearity phenomenon, but VIP value < 10, so all values are satisfied. The forecast equation has the form:

EAP-ECDS Score = -181.266 + 2.940 x Place of residence + 5.288 x Ethnicity + 3.439 x Gender + 1.925 x Height – 0.662 x Weight.

The factors of living place, ethnicity, gender, height, and behavior of the child are the positive factors, while the weight factor is the negative factor that can accurately predict the child's EAP - ECDS score.

IV. **CONCLUSION AND RECOMMENDATION**

The results of measuring the 3 to 5 years old children's development show that in the areas of (1) Cognitive development, (2) Socio-Emotional Development, (3) Motor Development, (4) Language and Emergent Literacy, (5) Health, Hygiene, and Safety, (6) Cultural Knowledge and Participation, (7) Approaches to Learning, 5-year-old children still face many challenges. The analytic results also reveal that the development is unequal among the groups of children in each region/province, place of living (urban/rural), gender, ethnicity, language used. These different terms are: General development, each development domain, weight, and height.

In particular, the outcome of children's development in the provinces that are delta areas/ having favorable conditions (Hai Phong, Dong Thap) is better than that of the children in the highlands/mountains (Kon Tum, Hoa Binh). Children living in urban areas are better than children in rural areas in both general development and each domain, except in motor development. In addition, girls outperform boys in most developmental areas and general development, except for motor development. The outcome of the Kinh ethnic group is higher than children of the ethnic minority group in all areas of development, except for motor development. Moreover, the weight and height of urban children are higher than rural children, and boys are more developed than girls. The weight and the height of Kinh ethnic group children are higher than the group of ethnic minorities children. Furthermore, the weight and height of urban children are higher than rural children, and boys are

more developed than girls. The weight and the height of Kinh ethnic group children are higher than the group of ethnic minorities children, in which the outcome of children in Kontum is significantly lower than the outcome of children of other provinces. This result shows that the government's policy should prioritize educational conditions and support young parents in ethnic minority, mountainous and disadvantaged areas. Furthermore, educating parents in all regions on comprehensive childcare should also be emphasized in rural and urban areas. In recent years, the policy on early childhood education in Vietnam has focused on promoting the quality of 5-6-year-old children to prepare them for school. In the coming years, it is necessary to pay attention to the quality of comprehensive care for children of all ages and the coordination between families and communities in early childhood care and education.

The development of the child depends on different factors. Living location, ethnicity, gender, height, parents' age, number of years parents attended high school, and family economic situations all positively impact on overall development and each area of development. On the other hand, several factors, including the number of individuals in the family, the number of children in the family, and illness condition, negatively impact on child development. Furthermore, the child's ethnicity, gender, weight, and height may correctly predict the development.

Based on the analysis and results of the ECD aged 3 to 5 years old using the EAP – ECDS, the following recommendations are made for consideration:

1. Using the results to impact the policy decision and invest factors that correlate with ECD
2. Making policies or measures to engage the multisectoral cooperation and coordination, including the Ministries of Health, Education and Training, Information and Communication, Labour War-Invalid and Social Affairs, and other stakeholders for the holistic ECD.
3. Continue to invest and expand the quality holistic ECE services to attract the children at the earliest age to access the long-term benefits of children, families, and society.
4. Establishing appropriate policies for the group of disadvantaged children, such as children in mountainous areas, rural children (places with challenging conditions), ethnic minority children, and children from the less advantaged economical family.
5. Providing the appropriate ECE programs in children’s mother tongue and reducing the language barriers through supplying the diversity resource and various materials.
6. Using the results to adjust the educational contents of the ECE curriculum and ECD standard in some domains, including cognitive development such as adding and subtracting numbers in the range of 10 or more, describing shapes. Language development and communication domain, for example, recognizing letters and reading letters, expressing thoughts, etc.). Socio-Emotional Development such as motional awareness (anger), problem-solving contents or joining cultural events and understanding festivals in the Cultural Knowledge and Participation domain.
7. Enhancing the knowledge and practice skills in ECE of parents and caregivers who positively affect early childhood development.
8. Using the results to revise and monitor the impact of structural quality and process quality on the ECD aged 3 - 5 years old, particularly 5-year-old children, should be considered to be ready to attend grade 1.

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