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The Developmental Domains Of By Demographic Factors Among Early Childhood

Lu Jing Yi[1], Ooi Boon Keat[2]

[1]Post Graduate Centre, Management and Science University
[2]School of Education and Social and Sciences, Management and Science University

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Abstracts

The global sustainable development goals have identified early childhood development as key to changing the world by 2030. This study focuses on the five domains of early childhood development as well as determining the level of early childhood development domains through demographic factors. This study examines the early childhood development domains based on John Santrock's developmental task theory, and 400 valid data were collected from the city of Chifeng, Inner Mongolia, China, using the whole cluster sampling method. The collected data were also subjected to data analysis methods such as independent samples T-test, ANOVA, and crosstable to determine the variability of early childhood development across demographic factors. The first finding of this study determined that only adaptive behaviour and socio-emotional development differed significantly by age of the toddler, while socio-emotional also differed significantly by gender of the toddler ; Different levels of development in the domains of physical, adaptive behaviour, socio-emotional, and cognitive development differed significantly by age of the toddler, while the level of physical development differed significantly by gender of the toddler. The second finding is that there is a significant difference between the different levels of development in the domains of adaptive behaviour and socio-emotional development with respect to the mother's level of education, while there is a significant difference between the different levels of development in the domains of physical development. The third finding of this study is that there is a significant difference in only social-emotional and cognitive development with respect to family income. The fourth finding of this study was that there was no significant difference in the age of the parents in all five developmental domains and their levels of development.

Keywords: early childhood development domains, physical, adaptive behavior, communication, social-emotional, cognitive

1 INTRODUCTION

The Early Moments Matter for Every Child report states that more than 43% of young children globally are at risk of not realising their full developmental potential in the domains of adaptive behaviour, physical development, cognition, socio-emotional domains, and communication, due to malnutrition, lack of family involvement, and lack of access to basic education services and to early childhood education. access to early childhood education, the report goes on to note that children who do not receive what are considered elements of “nurturing care”: appropriate health care, nutrition, early stimulation, and family care and protection, tend to have reduced cognitive, linguistic, and psychosocial outcomes, as well as behavioural competencies (United Nations Children's Fund, 2017).

The United Nations Children's Fund (2023) research indicates that early childhood development is multifaceted, including physical, social, emotional, cognitive, learning increasingly complex skills as they age and their brains mature, and gradually becoming more independent; however, each young child develops at different rates and in different domains and may reach standardised developmental goals at different times, and although each young child's rate of development varies and there are cultural and contextual differences in early childhood practices, all young children can make gains in

appropriate supports that enable them to survive, thrive, and reach their full potential. The global Sustainable Development Goals have identified early childhood development as key to transforming the world by 2030, and the Sustainable Development Goals on early childhood nutrition, health, education, and development include targets on nutritious diets and education, which, along with other goals, outline an agenda for improving early childhood development (World Health Organisation, 2018).

Young children begin to learn how to play with others, build friendships, and recognise, express, and control emotions. When this critical period is not handled properly, it will probably cause issues for children, like delayed development, and later cause other related developmental issues. For instance, the presence of 2 or more significant lags in the developmental domains of gross and fine motor, language, cognitive, social, and personal, and ability to perform activities of daily living in children under 6 years of age are considered developmentalally delayed (Zablotsky et al., 2023). Therefore, all domains in child development are crucial for a child's growth and development. According to Joan & Greg (2022), three domains of development—physical, cognitive, and socio-emotional—are interdependent and that they interact with each other in complex ways to influence a child's development. Hence, this research aimed to provide an overview of a child and the level of disparities in various developmental domains of children based on demographic factors.

2 THEORY

This study of the field of early childhood development is based on John Santrock's developmental task theory, which analyses the phenomenon of a person's lifelong development from the perspective of his or her individuality and social development and forms the idea of lifelong development (Santrock, 2011). First, in terms of developmental characteristics, John Santrock believes that development in lifelong development is multidimensional and continues throughout the life span. In terms of developmental dimensions, development includes biological, age dimensions, nature and upbringing, stability and variability, and continuity and stage dimensions (Santrock et al., 2014). Among them, nature and upbringing, stability and variability, continuity, and stage reflect the law of unity of opposites in Marxist philosophy (Santrock, 2002). Developmental issues in lifelong development are variable in nature (Santrock, 2011). In terms of nature and upbringing, human character is a product of both innate organisation and the environment in which a person lives during his or her own lifetime, especially during the period of development (John, 2013). Santrock (2013) believes that the process of lifelong development involves various perspectives that comprise psychoanalytic, cognitive, behaviourist, and social cognitive.

Santlock's developmental task theory specifies tasks and goals for different stages of adaptive behaviour development in young children. In the early years of early childhood, adaptation from home to the kindergarten environment needs to be accomplished, including adapting to new routines, rules, and interpersonal relationships. Theory mentions that young children need to accomplish appropriate body movement development tasks at specific stages, such as learning large muscle movements as well as small muscle movements. The process of accomplishing developmental tasks is also a process of continuous maturation of a child's physical functions. Young children explore the world around them and learn new knowledge and skills at different stages, which stimulates cognitive interest and curiosity. The cognitive skills such as thinking, memory, and attention help to promote the learning ability as well. Besides, the theory explains the development of young children's sense of self through the establishment of interpersonal relationships with their families, peers, and teachers, among others. Communication is also an important developmental task in which their language and communication styles become richer and more diverse. From simple vocabulary and gestures at the beginning, they will be able to use complete sentences, complex vocabulary, and different intonations and tones of voice to communicate, to better express their feelings and ideas, and to establish effective communication and interaction with others. Therefore, the developmental task theory supports the five domains of early childhood development in this study, and its research theory defines the early childhood development in this study as developmental tasks that are adaptive behaviour, physical, communication, cognitive, and socio-emotional five developmental domains.

3 LITERATURE REVIEW

Researchers around the world have observed alarming behavioural problems in young children, with worsening trends compared to the pre-pandemic period (Gassman-Pines, Ananat & Fitz-Henley, 2020). Therefore, there are many scholars who have studied this, such as Sun et al. (2022), who defined children's behaviours as externalising behaviours and internalising behaviours; externalising behaviours refer to tantrums, hyperactivity, and aggressive behaviours, while internalising behaviours refer to fearful and anxious behaviours, and their findings showed that there was no interaction between children's behavioural control or peer socialisation skills and parental distress on children's behavioural problems. In contrast, He (2019), behaviour into the dimensions of conduct, learning, mind-body, impulsivity, anxiety, and

hyperactivity, showed that girls were 1.594 times more at risk of detecting behavioural problems than boys, and that children's academic performance was correlated with behavioural problems.

Dale et al.'s (2019) study defined physicality as the ability to be physically active, and as such, its findings indicated that physical activity was negatively associated with depression, that there was a relationship between increased physical activity and decreased anxiety, and that physical activity positively impacted self-esteem outcomes in all types of populations, including typically developing, overweight and obese, and children and adolescents with disabilities. In contrast, Veldman et al.'s (2021) study concluded that young children's physical development refers primarily to the dimensions of motor development, cardiorespiratory and muscular fitness, maintaining a healthy weight and obesity levels, bone health, enhanced cognition, brain health, emotional regulation, mood, and quality of life, and therefore, its findings showed that physical activity was positively associated with motor development and cognitive development are positively correlated, and there is insufficient evidence for other dimensions, such as body composition, cardiometabolic health indicators, and bone health, due to inconsistent findings.

Cognitive development is an area of scientific inquiry with great potential to improve the lives of young children (Nketia et al., 2021). Therefore, it has been studied by many scholars. The study of González et al. (2020) defined cognition as three dimensions: language, perceptual performance, and numerical, and therefore, its results showed lower scores in cognitive development and mother's and father's education in lower social classes, and the level of education of mothers and the social class of fathers play the most important role in the social gradient of children's cognitive development role. In contrast, Roberts et al.'s (2022) study defined cognition as brain, attention, memory, language vocabulary, learning, literacy, and neurological dimensions, and therefore, its findings show that nutritional interventions have a positive impact on the cognitive development of malnourished young children. Nutritionally deficient young children who received micronutrient supplementation consistently demonstrated significant progress in cognitive outcomes; in addition, nutritionally deficient young children who increased fish consumption demonstrated cognitive improvement and emphasised the importance of adequate nutritional intake in the second 1,000 days of a young child's life and the critical role of adequate nutrition in cognitive development.

Social-emotional is increasingly recognised as a predictor of valuable life outcomes, and as a result, many scholars have researched this area (Schoon, 2021). Santibañez & Guarino's (2021) study defined social-emotional as the dimensions of self-management, growth mindset, self-efficacy, and social awareness, and as a result, its findings found that absence affects social-emotionality, especially the dimensions of social awareness, self-efficacy, and self-management.Martinsone et al.'s (2022) study defined social-emotionality in a similar but slightly different way, and its study concluded that social-emotionality refers to the dimensions of self-awareness, self-management, social awareness, interpersonal skills, and responsible decision-making. Their findings found that professorial evaluations of children's difficult and pro-social behaviours and self-management were positively and significantly correlated with parental evaluations and found no correlation between parents' and teachers' assessments of children's social-emotionality in the areas of self- and social-awareness, interpersonal relationship skills, and responsible decision-making.

Nordberg & Jacobsson's (2021) study considered young children's communication development as a linguistic competency, defining it as the ability to interact, communicate, pay attention, language comprehension, meta-linguistic awareness, articulation, word production, and constructing sentences; however, their findings found that the Early Registry of Language Development Instrument was the most commonly used instrument to assess young children's language and communication; however, the participants were unsure that the Early Registration Instrument for Language Development does have a scientific basis. Heidlage et al.'s (2020) study, on the other hand, defined young children's communication into the dimensions of expressive vocabulary, receptive vocabulary, receptive language, and expressive language, and as such, its findings found that parent-implemented interventions did not significantly improve receptive vocabulary and significantly improved expressive language but did not improve receptive language.

4 RESEARCH METHOD

This study uses quantitative research methods. Quantitative research can help this study to quantify and statistically analyse the relationships between variables, as well as help this study to test hypotheses and make causal inferences, and through large-scale data collection and statistical analysis, overall trends and associations can be revealed and generalised to a wider range of people or situations. Through statistical analysis and control variables, this study can assess the relationship between variables and determine the influential relationships involved.

The positivist paradigm usually employs quantitative research methods to collect data through survey research and quantify and interpret the data using statistical analysis (Mathotaarachchi & Thilakarathna, 2021). Through the positivist paradigm, this study can analyse and explain the patterns and influences behind them by measuring the level of objective early childhood development domains. Therefore, this study uses the positivist research paradigm.

The data collection for this study was collected at a single point in time. The cross-sectional survey method was used to validate and analyse the data collected for this study in order to arrive at objective research conclusions.

The scope of this study was on young children enrolled in kindergartens in Chifeng City, Inner Mongolia, China. Meanwhile, the domains of early childhood development in this study were defined through previous research and Developmental Profile 3, the measurement tool used in this study, which includes adaptive behaviour, physical, cognitive, socio-emotional, and communication development. According to Developmental Profile 3 by D. Alpren (2007), early childhood development in this study refers to five domains, which are adaptive behaviour, cognitive, socio-emotional, physical, and communication; Adaptive behaviour in this study refers to the ability, skills, and maturity to cope with the environment, which is assessed mainly in the areas of eating, dressing, functioning independently, and using modern technology; physical refers to coordination of large and small muscles, strength, endurance, flexibility, and ability to perform tasks in sequential motor skills, gross motor skills, and fine motor skills; cognitive refers to intelligence, practical learning skills, and academic abilities in reading, writing, arithmetic, computer use, and logic; and socio-emotional refers to interpersonal competence, social and emotional understanding, and performance in social situations, the Or it can also be defined as a young child's relationships with friends, relatives, and adults; communication refers to verbal and nonverbal skills of expressing and receiving communication, that is, the use and understanding of spoken and written language and gestures.

The study population for this research was 5--6 year olds in four kindergartens.Since cluster random sampling helps to develop meaningful interpretations, it gives specific reference value to the results of this study (Sedgwick, 2014). And cluster random sampling is stronger in capturing the specific qualities of the research subjects; it is suitable for research with a clearer purpose as well as relevant characteristics (Henderson & Sundaresan, 1982). The main research objective of this study was to study the level of development of young children in five domains and the effect of age, gender, parents' age, parents' level of education, and family income on the level of development of young children; therefore, the study utilised the method of whole cluster sampling. Therefore, cluster random sampling is used in this study. There are 109,197.00 children enrolled in kindergarten in Chifeng City (Convergence Data, 2022). According to the contents of the form for determining sample size (Azam et al., 2021), this study requires a sample size of 384 valid data to be drawn. 500 online questionnaires were distributed for this study, and after excluding invalid questionnaires, 400 valid questionnaires were left.

The dependent variable of this study is the test instrument, the Developmental Profile 3 scale, which is a standardised scale used by many researchers. The DP-3 is an instrument that can assess the development and functioning of children and adolescents.The DP-3 can help in identifying developmental delays, determining the need for interventions, determining the appropriate activities to strengthen identified weaknesses, and coordinating with school programs like special education and school programs such as IEPs (Alpern, 2007). In addition to that, this study also set up a demographic information questionnaire.

5 RESULTS

A total of 400 young children participated in this study, 210 (52.5%) boys and 190 (47.5%) girls. This indicates that both boys and girls were willing to respond and participate in this study. This study mainly used independent samples t-test, ANOVA, and crosstable to analyse the developmental level of the toddlers and the differences in the developmental level of the toddlers with different factors.

Table 1 The differences of developmental domains by age

Domains	Child age	Mean	SD	*t*	*p*
Physical	5	103.81	18.896	-3.079	.133
	6	109.47	17.542		
Adaptive behavior	5	106.57	19.172	**-3.300**	**.037**
	6	112.54	16.426		
Socio-Emotional	5	113.80	16.401	**-4.723**	**.000**
	6	120.74	12.060		
Cognitive	5	105.84	17.019	-3.174	.558
	6	111.22	16.688		
Communication	5	107.10	20.091	-2.108	.767
	6	111.29	19.482		

Significant Level: $p<0.05$

The comparison of the development domain standard scores by age group is displayed in Table 1. Only two of the five developmental domains—adaptive behaviour and ocio-emotional—show significant differences between children aged 5 and 6 (t = 3.300, p =.037, and t = -4.723, p =.000, respectively); the other domains did not substantially differ between the two groups. The mean value of all developmental domains was basically higher among 6 year old children, such as physical mean = 109.47, SD=17.542; adaptive behaviour mean= 112.54, SD = 16.426; socio-emotional mean = 120.74, SD=111.22, SD=16.688; communication mean=111.29, SD=19.482.

Table 2 The differences of developmental domains by gender

Domains	Child gender	Mean	SD	*t*	*p*
Physical	Male	103.97	18.878	-2.740	.382
	Female	109.00	17.734		
Adaptive behavior	Male	107.01	18.992	-2.609	.212
	Female	111.74	17.014		
Socio-Emotional	Male	114.99	16.112	**-2.742**	**.001**
	Female	119.07	13.369		
Cognitive	Male	106.27	17.558	-2.469	.227
	Female	110.46	16.259		
Communication	Male	106.94	20.162	-2.172	.594
	Female	111.25	19.420		

Significant Level: p<0.05

Table 2 shows the comparative analysis of the standardised scores of the developmental domains for each gender group. Out of the five domains, only social-emotional has a significant difference between boys and girls with t = -2.742 and p =.001, respectively, while the other developmental domains have no significant difference between the two groups. The mean value of all developmental domains was basically higher among girls, such as physical Mean = 109.00, SD = 17.734; adaptive behaviour Mean = 111.74, SD = 17.014; socio-emotional Mean = 119.07, SD = 13.369; mean=110.46, SD = 16.259; mean=111.25, SD = 19.420.

Table 3 The differences of developmental domains by mothers'/Fathers' level of education

Domains	level of education	Identities	Mean	SD	*t*	*p*
Physical	Below bachelor	Mothers'	103.56	18.371	-3.189	.938
		Fathers'	104.01	18.251	-2.580	.587
	Bachelor and above	Mothers'	109.57	18.415	-3.189	.938
		Fathers'	108.88	18.553	-2.580	.587
Adaptive behavior	Below bachelor	Mothers'	108.55	17.695	-.886	.277
		Fathers'	108.60	17.398	-.920	.219
	Bachelor and above	Mothers'	110.20	18.577	-.886	.277
		Fathers'	110.32	19.160	-.920	.219
Socio-Emotional	Below bachelor	Mothers'	116.68	14.360	-.938	.805
		Fathers'	116.70	14.315	-.699	.821
	Bachelor and above	Mothers'	118.08	14.884	-.938	.805
		Fathers'	117.77	15.532	-.699	.821
Cognitive	Below bachelor	Mothers'	106.91	16.918	-1.754	.487
		Fathers'	106.43	16.487	-2.181	.132
	Bachelor and above	Mothers'	109.97	17.073	-1.754	.487
		Fathers'	110.25	17.719	-2.181	.132
Communication	Below bachelor	Mothers'	107.06	19.678	-1.864	.871
		Fathers'	106.29	19.851	-3.053	.473
	Bachelor and above	Mothers'	110.84	19.995	-1.864	.871
		Fathers'	112.42	19.231	-3.053	.473

Significant Level: p<0.05

Table 3 shows the comparative analysis of standardised scores in the developmental domains for the father's and mother's education level groups. There was no significant difference between the two groups in any of the five domains. The mean

for the physical domain was essentially higher for fathers with less than a bachelor's degree, such as Mean=104.01, SD=18.251, and mothers with more than a bachelor's degree, such as Mean=109.57, SD=18.415; for the adaptive behavior domain, the mean was essentially the same for fathers' education level as for mothers'; for the socio-emotional domain, the mean for the undergraduate and higher education was essentially the same for father's education level and mother's education level are basically the same, and among undergraduate and above education level, mother's undergraduate and above education level of young children's physical development level is higher, such as Mean=118.08, SD=14.884; the mean of the cognitive domain is that father's education level and mother's education level are basically the same among undergraduate and above education level, and among undergraduate and above education level of young children with father's undergraduate and above education level's Physical development was higher, such as mean = 110.25, SD = 17.719; the mean of cognitive domain was basically higher for mothers with less than bachelor's degree, such as mean = 107.06, SD = 19.678, and higher for fathers with more than bachelor's degree, e.g., mean = 112.42, SD = 19.231.

Table 4 The differences of developmental domains by family income

Domains	Family income	Mean	SD	*F*	*p*
Physical	＜5000	107.35	18.651	.991	.412
	5001—10000	104.47	18.398		
	10001—15000	108.95	17.997		
	15001—20000	108.11	20.043		
	＞20001	105.96	18.278		
Adaptive behavior	＜5000	110.56	17.468	1.256	.287
	5001—10000	107.39	18.729		
	10001—15000	111.71	17.774		
	15001—20000	112.29	18.301		
	＞20001	107.77	17.699		
Socio-Emotional	＜5000	119.78	12.935	**3.444**	**.009**
	5001—10000	114.35	15.916		
	10001—15000	119.67	13.334		
	15001—20000	120.89	13.512		
	＞20001	114.94	16.053		
Cognitive	＜5000	116.93	19.892	**3.802**	**.005**
	5001—10000	109.18	17.290		
	10001—15000	104.87	15.651		
	15001—20000	110.39	13.994		
	＞20001	115.11	15.422		
Communication	＜5000	109.20	19.127	1.489	.205
	5001—10000	106.45	20.977		
	10001—15000	110.38	19.429		
	15001—20000	113.42	18.226		
	＞20001	111.54	18.585		

Significant Level: p<0.05

Table 4 shows the comparative analysis of the standardised scores of the developmental domains for the family income groups. Of the five domains, only the socio-emotional and cognitive domains were significantly different across family income groups, $F = 3.444$, $p = .009$, and $F = 3.802$, $p = .005$, respectively, while the other developmental domains were not significantly different across family income groups. The means for the adaptive behaviour, social-emotional, and communication development domains were basically higher for young children with family incomes of 15,001-20,000, such as Adaptive Behaviour Mean = 112.29, SD = 18.301; Social-Emotional Mean = 120.89, SD = 13.512; Communication Mean = 113.42, SD = 18.226. Means in the physical development domain were essentially highest for toddlers with family incomes of 10001-15000, such as Physical Mean = 108.95, SD = 17.997.Means in the cognitive development domain were essentially highest for toddlers with family incomes <5000, e.g., cognitive mean = 116.93, SD = 19.892.

Table 5 The differences of developmental domains by parents age

Domains	Parents' age	Mean	SD	*F*	*p*
Physical	＜30	101.25	21.793	.917	.400
	31——40	106.49	18.285		
	＞41	108.13	18.651		
Adaptive behavior	＜30	107.75	18.032	.082	.922
	31——40	109.38	18.082		
	＞41	108.91	20.188		
Socio-Emotional	＜30	118.10	16.026	.207	.813
	31——40	116.74	15.010		
	＞41	118.22	14.529		
Cognitive	＜30	108.60	19.198	.018	.983
	31——40	108.20	17.064		
	＞41	108.72	16.159		
Communication	＜30	107.20	20.271	.501	.606
	31——40	109.36	19.831		
	＞41	106.00	20.802		

Significant Level: p<0.05

Table 5 shows the comparative analysis of the standardised scores of the developmental domains for the parental age groups. In none of the five domains was there a significant difference between the parental age groups. Physical, social-emotional, and cognitive development domain means were basically higher for toddlers whose parents' age was > 41, such as physical mean = 108.13, SD = 18.651; social-emotional mean = 118.22, SD = 14.529; and cognitive mean = 108.72, SD = 16.159. Adaptive behaviour and communication development domains had basically the highest means for toddlers whose parents' toddlers between the ages of 31--40 were the highest, such as Adaptive Behaviour Mean = 109.38, SD = 18.082; Communication Mean = 109.36, SD = 19.831.

Table 6 The Association between the level of developmental domains and parents age

Parents' age Domains	Level	<30	31—40	>40	X^2	*p*
Physical	Delayed	2	8	0	7.271[a]	.508
	Below Average	3	43	3		
	Average	8	163	14		
	Above Average	2	61	7		
	Well Above Average	5	73	8		
Adaptive behavior	Delayed	0	8	1	2.767[a]	.948
	Below Average	2	24	3		
	Average	11	174	14		
	Above Average	3	47	3		
	Well Above Average	4	95	11		
Socio-Emotional	Delayed	0	1	0	3.243[a]	.918
	Below Average	1	11	1		
	Average	5	134	12		
	Above Average	7	73	6		
	Well Above Average	7	129	13		
Cognitive	Delayed	0	7	0	11.733[a]	.164
	Below Average	4	18	3		
	Average	7	200	18		
	Above Average	5	48	5		
	Well Above Average	4	75	6		
Communication	Delayed	0	11	1	4.476[a]	.812
	Below Average	3	26	5		

	Average	8	132	12
	Above Average	5	103	8
	Well Above Average	4	76	6

Significant Level: p<0.05

Table 6 shows the comparative analysis of the developmental levels of the parental age groups. There is no significant difference in the level of development between parental age groups in any of the five domains.

Children with parents under 30 years of age also tended to have lower than average and delayed levels of physical, socio-emotional, and cognitive development, at 25% (5), 5% (1), and 20% (4), respectively. Children with parents aged 41 years and older also had below-average and delayed development in adaptive behaviour and communication, at 12.5% (4) and 18.7% (6), respectively.

Table 7 The Association between developmental domains and family income

Family income								
Domains	Level	< 5000	5001—10000	10001—15000	15001—20000	> 20001	X^2	*p*
Physical	Delayed	2	3	2	2	1	10.728[a]	.826
	Below Average	3	25	9	4	8		
	Average	28	82	36	15	24		
	Above Average	9	29	18	5	9		
	Well Above Average	13	31	20	12	10		
Adaptive behavior	Delayed	1	5	1	1	1	9.454[a]	.894
	Below Average	2	16	4	3	4		
	Average	29	84	41	16	29		
	Above Average	8	25	10	4	6		
	Well Above Average	15	40	29	14	12		
Socio-Emotional	Delayed	0	1	0	0	0	15.138[a]	.515
	Below Average	0	8	3	0	2		
	Average	18	73	27	11	22		
	Above Average	14	35	17	8	12		
	Well Above Average	23	53	38	19	16		
Cognitive	Delayed	3	3	0	0	1	**28.765[a]**	**.026**
	Below Average	1	18	3	1	2		
	Average	28	103	45	18	31		
	Above Average	8	17	19	6	8		
	Well Above Average	15	29	18	13	10		
Communication	Delayed	1	8	1	1	1	13.853[a]	.610
	Below Average	5	17	10	1	1		
	Average	23	68	27	13	21		
	Above Average	13	46	28	12	17		

	Well Above Average	13	31	19	11	12

Significant Level: p<0.05

Table 7 shows the comparative analysis of the developmental levels of the family income groups. Out of the five domains, only the cognitive domain has a significant difference in the level of development between the family income groups with X^2 = 28.765a, p =.026, while the other domains do not have a significant difference in the level of development between the different family income groups.

Children with family incomes above 20001 also tended to have lower than average physical development and developmental delays, with a percentage of 17.3% (9). Children with household incomes between RMB5001 and RMB10,000 also had below-average adaptive behaviours and cognitive development, with rates of 12.7% (21) and 12.3% (21), respectively. Children with family incomes between RMB5001 and RMB15,000 had below-average social-emotional development and delays at a rate of 5.2% (9 children). Children with family incomes between 10001 and 15000 also had a lower than average and delayed level of communication development at 12.9% (11).

Table 8 The Association between developmental domains and father/Mother's level of education

		Father's level of education				Mother's level of education			
Domains	Level	Below bachelor	Bachelor and above	X^2	*p*	Below bachelor	Bachelor and above	X^2	*p*
Physical	Delayed	6	4	13.564[a]	.329	6	4	12.493[a]	.131
	Below Average	26	23			25	24		
	Average	107	78			101	84		
	Above Average	30	40			28	42		
	Well Above Average	38	48			34	52		
Adaptive behavior	Delayed	1	8	17.741[a]	.124	2	7	**28.867[a]**	**.000**
	Below Average	16	13			14	15		
	Average	113	85			106	93		
	Above Average	23	30			20	33		
	Well Above Average	54	56			52	58		
Socio-Emotional	Delayed	0	1	13.996[a]	.301	0	1	**38.202[a]**	**.000**
	Below Average	3	10			3	10		
	Average	87	64			82	69		
	Above Average	45	41			41	45		
	Well Above Average	23	77			68	81		
Cognitive	Delayed	4	3	16.493[a]	.170	4	3	13.578[a]	.093
	Below Average	10	15			10	15		
	Average	131	94			120	105		
	Above Average	29	29			26	32		

	Well Above Average	33	52			34	51		
Communication	Delayed	7	5	19.487[a]	.077	5	7	12.076[a]	.148
	Below Average	21	13			16	18		
	Average	90	62			86	66		
	Above Average	53	63			48	68		
	Well Above Average	36	50			39	47		

The developmental levels of the mother's and father's education level groups are compared in Table 8. The only two of the five domains that showed a significant difference between the mother's education level groups were the socio-emotional and adaptive behaviour developmental levels (X^2 = 28.867a, p =.000 and X^2 = 38.202a, p =.000, in that order), while the developmental levels of the other domains did not. Regarding the father's educational attainment, there was no discernible variation in the degree of development across any of the five areas.

In terms of parents education level, fathers with lower bachelor's degrees of education tend to have physical, socio-emotional, and communication development levels of children that tend to be also below average and delayed, at 15.4% (32); 9.3% (18); and 13.4% (28), respectively. While the education level among fathers with bachelor and above qualification was below average, the adaptive behaviour and cognitive development of children were below average and delayed, at 10.9% (21); 9.3% (18), respectively.

In terms of parents' education level, children whose mothers had less than a bachelor's degree tended to have a lower than average level of physical development and developmental delays, accounting for 15.9% (31). Children whose mothers had a bachelor's degree or higher tended to have lower than average and delayed development in adaptive behaviour, social-emotional, cognitive, and communication skills, with 10.6% (22 children), 42.3% (11 children), 8.7% (18 children), and 12.1% (25 children), respectively.

Table 9 The Association between developmental domains and child's age

Child's age					
Domains	Level	5 years old	6 years old	x^2	p
Physical	Delayed	7	3	**10.971[a]**	**.027**
	Below Average	36	13		
	Average	102	83		
	Above Average	32	38		
	Well Above Average	43	43		
Adaptive behavior	Delayed	8	1	**12.147[a]**	**.016**
	Below Average	22	7		
	Average	111	88		
	Above Average	26	27		
	Well Above Average	53	57		
Socio-Emotional	Delayed	1	0	**17.204[a]**	**.002**
	Below Average	11	2		
	Average	97	54		
	Above Average	44	42		
	Well Above Average	67	82		

Cognitive	Delayed	3	4	**12.202[a]**	**.016**
	Below Average	20	5		
	Average	130	95		
	Above Average	30	28		
	Well Above Average	37	48		
Communication	Delayed	6	6	6.957[a]	.138
	Below Average	22	12		
	Average	91	61		
	Above Average	63	53		
	Well Above Average	38	48		

Significant Level: p<0.05

Table 9 shows the comparative analysis of the developmental levels of the children's age groups. Among the five domains, the developmental levels of the physical, adaptive behaviour, social-emotional, and cognitive domains were significantly different between the toddler's different age groups, respectively, X^2 = 10.971a, p =.027; X^2 = 12.147a, p =.016; X^2 = 17.204a, p =.002; and X^2 = 12.202a, p =.016. Only the communication domain's developmental level was not significantly different in the toddler age group.

The proportion of children aged 5 years with lower than average development in physical ability, adaptive behaviour, social-emotional, cognition and communication, and delayed development was higher: 19.6% (43), 8.9% (16), 13.6% (30), 4.6% (8), 5.5% (12), 1.1% (2), 10.5% (23), 5% (9), 12.7% (28), and 10% (18), indicating that age differences lead to lower levels of development in physical ability, adaptive behaviour, social-emotional, cognition and communication, and delayed development. 5% (9); 12.7% (28); 10% (18), suggesting that age differences result in lower levels of physical ability, adaptive behaviour, socio-emotional, cognitive, and communication development and slower development.

Table 10 The Association between developmental domains and child's gender

Child's gender					
Domains	Level	Male	Female	X^2	*p*
Physical	Delayed	7	3	**9.643[a]**	**.047**
	Below Average	32	17		
	Average	102	83		
	Above Average	29	41		
	Well Above Average	40	46		
Adaptive behavior	Delayed	8	1	7.516[a]	.111
	Below Average	16	13		
	Average	109	90		
	Above Average	27	26		
	Well Above Average	50	60		
Socio-Emotional	Delayed	1	0	4.811[a]	.307
	Below Average	9	4		
	Average	84	67		
	Above Average	46	40		
	Well Above Average	70	79		

Cognitive	Delayed	5	2	4.316[a]	.365
	Below Average	14	11		
	Average	123	102		
	Above Average	31	27		
	Well Above Average	37	48		
Communication	Delayed	6	6	**11.503[a]**	**.021**
	Below Average	25	9		
	Average	86	66		
	Above Average	57	59		
	Well Above Average	36	50		

Significant Level: p<0.05

Table 10 shows the comparative analysis of the developmental levels of the children's age groups. Out of the five domains, the level of development in the physical and communication domains differed significantly between the different gender groups of young children, as X^2 = 9.643a, p =.047, and X^2 = 11.503a, p =.021, respectively. The level of development in the other developmental domains did not differ significantly between the gender groups of young children.

From a gender perspective, boys had lower average and delayed levels of physical, adaptive behaviour, socio-emotional, cognitive, and communicative development than girls, at 18.5% (39), 7.3% (14), 4.8% (10), 9.1% (19), and 14.8% (31), respectively, which suggests that gender differences lead to lower than average and delayed levels of physical, adaptive behaviour, socio-emotional, cognitive, and communicative development among boys, which also tends to be lower than average and delayed. This indicates that gender differences result in boys also tending to have lower than average and delayed levels of physical, adaptive behaviour, socio-emotional, cognitive, and communication development.

6 DISCUSSION

The different developmental levels of the physical, adaptive behaviour, social-emotional, and cognitive developmental domains differed significantly by age of toddlers, and the levels of physical development differed significantly by There is a significant difference in the gender of young children.In addition to this, the present study found that there is a significant difference between the different developmental levels of the physical and communication domains in terms of the gender of the toddlers, while there is no significant difference between the different developmental levels of the other developmental domains in terms of the gender of the toddlers. The findings of the present study confirm the findings of previous studies, as the study of Karmaker et al. (2022) found statistically significant relationships between early childhood development and family living standards, child gender, age, and the study of Veijalainen et al. (2021) found gender differences in young children's expression of social-emotional aspects.

Another interesting finding of this study was that there was no significant difference between mothers' and fathers' education levels in all five domains of early childhood development; there is no significant difference in all the different developmental levels of the five developmental domains in terms of the level of education of fathers, but there is a significant difference in the different developmental levels of the domains of adaptive behaviour and socio-emotional development in terms of the level of education of mothers, and there is no significant difference in the different developmental levels of the other developmental domains in terms of There were no significant differences in all of the other developmental domains with respect to the mother's education level. The findings of the present study confirmed the results of previous studies. The study of Dennis et al. (2022) found that family income, highest level of parental education, and better cognitive functioning, as well as better performance on assessments of executive functioning, were associated with each other. The study of Wang et al. (1992) also explored the relationship between parental literacy and young children's intellectual development, and the results showed that in families where parents had higher levels of educational attainment The results showed that families with more educated parents had relatively higher levels of intellectual development in their children. An Indonesian study found that maternal education was associated with delayed child development (Laksono et al., 2022).

Another significant finding of this study is that only socio-emotional and cognitive development differed significantly with respect to family income. The findings of this study are consistent with those of Cooper & Stewart (2021), who concluded that income has a positive causal effect on the “intermediate outcomes” that are important to child development,

and Attanasio et al. (2022), who discussed the framework used in economics to model the relationship between parental investment and early childhood development. Attanasio et al. (2022) also discuss the framework used in economics to model parental investment and early childhood development and use it as an organising tool to review some of the empirical evidence from early childhood research.

A final interesting finding of this study was that there was no significant difference in the age of parents and their level of development in all five developmental domains.Liao's (2024) study explored the effects of having older or younger parents on children's cognitive and affective development and social adjustment from a variety of biological, psychological, and social perspectives. Its study concluded that older parents may have advantages in terms of finances and experience but may not be able to give their children as much companionship and interaction as younger parents in terms of physical strength and energy; younger parents may be more energetic and innovative in their thinking but may be relatively deficient in terms of financial stability and parenting experience. The paper provides a comprehensive theoretical foundation and guidelines for research directions for further studies on the relationship between parental age and child development.

This study suggests that the government should increase policy support and financial investment in early childhood education, formulate relevant laws and regulations, and protect the legitimate rights and interests of young children. Strengthen the management and supervision of early childhood education institutions, standardise the behaviour of running schools, and improve the quality of early childhood ducation. Educators should create a safe, warm, and inspiring educational environment, provide rich learning materials and activity opportunities, and stimulate young children's interest in learning and desire for exploration. Educators should maintain close communication and cooperation with parents and pay joint attention to the development of young children.

The significance of this study mainly lies in the fact that the study can provide a timely understanding of the developmental status of young children in the five domains of physical, cognitive, communication, social-emotional, and adaptive behaviours and identify possible developmental delays, behavioural problems, and learning disabilities as early as possible, so that targeted interventions can be taken to help young children overcome their difficulties and grow up healthily. This study helps to discover the talents, interests, and potentials of young children and provides a basis for individualised education, thus enabling better development of their strengths. Each young child has his or her own unique areas of strengths, and the study can better explore these potentials and provide more possibilities for the future development of young children. Based on the findings of this study of early childhood development, educational goals and curricula can be formulated to meet the age-specific characteristics and developmental needs of young children, so that the content of education can be more targeted and systematic.

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