

Factors influencing parents' behaviours to promote early childhood development of 1–3-year-old children with delayed language development in Thailand

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Received: 18 June 2022 **Revised:** 23 August 2022 **Accepted:** 26 August 2022 **Available online:** January 2023

DOI: 10.55131/jphd/2023/210111

ABSTRACT

Children with delayed language development are long-term problems. The purpose of this study was to investigate behaviours and factors influencing parents' behaviours to promote the language development of 1-3 years old children with delayed language in the 2nd Health Service Region in Thailand. The questionnaire consisted of 5 parts, 1) personal characteristics, 2) knowledge aspects, 3) perception aspects, 4) support reception aspects and 5) behaviours to promote language development. Researchers collected the data from 537 participants. Data were analyzed with descriptive statistics and multiple regression analysis. Results of the study showed that the participants' overall behaviour to promote language development was at the high level (94.41%). The most frequent practice in general behaviour was observing children's gestures to communicate understanding (64.25%); in receptive language it was training children to follow simple instructions (97.21%); and in expressive language it was giving chances for children to make utterances (94.59%). The factors influencing parents' behaviours to promote language development of 1-3-year-old children with delayed language development at the statistical significance level of 0.05 were the main caregiver, support from communities and social networks, perceived self-efficacy in language development promotion, ages of caregivers, genders of caregivers, support from families, support from the health service units, occupation as government or state enterprise officers, perceived barriers in language development promotion, and grandparents as caregivers. For recommendations, many factors can affect parents' behaviours to promote the language development of 1-3-year-old children with delayed language development. Therefore, the health service units should study methods that should be appropriate to promote early childhood with delayed language development.

Key words:

early childhood; delayed language development; development promotion

Citation:

Wanrichada Kittitongsophon, Artittaya Wangwonsin, Wutthichai Jariya. Factors influencing parents' behaviours to promote early childhood development of 1–3-year-old children with delayed language development in Thailand. J Public Hlth Dev. 2023;21(1):150-160 (<https://doi.org/10.55131/jphd/2023/210111>)

INTRODUCTION

Early childhood development is important since early childhood sees the fastest brain growth period compared to other ages.¹ Therefore, Parents' promotion of child development correctly and properly is important as well.² Delayed language development refers to newborn to 5-year-old children's improper speech or comprehension of other people's speech or gestures in comparison to the level they are expected to attain and delayed language can be assessed at the age of 2 months upwards³ or in children who do not pass the skill assessment according to their age as specified in the Developmental Surveillance and Promotion Manual.⁴ Language development relates to children's cognitive and learning abilities⁵ since language is a fundamental factor for learning and social interaction. Children with delayed language development are likely to have other long-term problems and are at risk of continuous delayed language development, which includes lower intelligence, learning problems in reading and word spelling, emotional problems, behavioural problems, socializing problems, high unemployment and low economic status in the future.⁶ Language development in early childhood is classified into 2 aspects: Receptive language (RL) and Expressive language (EL), RL refers to understanding of other people's verbal and body language, while EL refers to the ability to make utterances or express gestures for communicating with other people.⁴ Worldwide, the number of children with underdevelopment is estimated to be 250 million or about 43% of 5 years and below children are at risk for developmental delay.⁷ According to 6 surveys in Thailand during 1999 – 2019, the delayed development was mostly found in language development at 13.7%, 33.4%, 21.8%, 19%, 38.2%, and 21.6%

respectively.⁸ In a comparison of the age periods in children with delayed language development in 2018 – 2020, the age of 1 – 3 years were the highest at 67.68%, 69.80%, and 57.86% respectively.⁹ In Thailand, delayed language development is the greatest problem in every health service unit, especially in the 8th health service unit (38.0%), followed by the 2nd health service unit (32.0%) and the 11th health service unit (26.6%) respectively. In the 2nd health service unit, this problem is found at the top rank of problems in all provinces. The province with the greatest problem of delayed language development is Sukhothai Province (62.6%), followed by Tak Province (60%) and Uttaradit Province (58.8%) respectively.⁹

The Developmental Surveillance and Promotion Manual (DSPM) is an important instrument to assess and monitor childhood development with the focus on the ages of 9, 18, 30, 42 years and 60 months by public health personnel. If children with suspected developmental delay are found, such delay is stimulated by teaching parents how to practice promotion of developmental activities at home by using the DSPM for 1 month before reassessing them. If the children are still with a delay in their development, they will be referred for medical assessment and treatment plans for stimulating their development according to the severity levels of delayed development.⁴

Based on the literature review, the factors influencing caregivers' behaviour to promote child development are in 3 aspects: 1) personal aspects including parenting experience, economic conditions, and knowledge of child development promotion;¹⁰⁻¹² 2) perception aspects including perceived self-efficacy, perceived benefits, and perceived barriers in child development promotion,¹³ and 3) Support reception aspects including receiving support from health service units,

communities and social networks, and families.^{11, 13} Perception and support reception is reinforcement for commitment to do, practice, or interact among people with desirable behaviours.¹¹⁻¹³

The 2nd health service unit encounters delayed language development in early childhood on the 2nd rank of the country and this trend is likely to move higher. Parenting caregivers are very important in child development promotion since they can continuously stimulate the child's language development maturity. Therefore, sufficient data are needed for solving the problem of child underdevelopment. The researchers are interested in studying behaviours to promote language development and factors influencing parents' behaviours to promote language development of 1-3-year-old children with delayed language development. The study results are useful in development promotion for children with delayed language development.

METHODS

The predictive research aimed to study factors influencing parents' behaviours to promote language development of 1-3-year-old children with delayed language development. The research was a part of an advanced mixed methods research design with a multistage evaluation design for a project called the development of the model for promoting development of language in childhood age 1-3 years by parents through mobile applications. The study was considered and approved by Naresuan University Research Ethics Committee according to the international research standards: Declaration of Helsinki, The Belmont Report, CIOMS Guidelines, and International Conference on Harmonization in Good Clinical Practice (ICH-GCP). The project registration No. was P3-0133/2564.

The population of the study was 537 main caregivers of 1-3-year-old children

with delayed language development in the 2nd health service unit. The inclusion criteria were 1) being the main caregivers for at least 6 months for 1-3-year-old children with delayed language development without other delayed development or abnormality 2) ages over 20 years 3) having abilities to read, write, and communicate in Thai and 4) consent to complete the questionnaire. The Exclusion criteria were 1) child in custody with delays in other developments as well for example, Gross Motor development (GM), Fine Motor development (FM), Personal and Social development (PS) etc. 2) child in custody with other morbidities as well, for example, hearing impairment, autism, brain or muscle disorders associated with speech etc.

The sample size was calculated from the number of variables by using Thorndike's formula.¹⁴ In the study, 15 independent variables were calculated by the formula and the result was obtained as a sample size of 200. Purposive sampling was used to recruit 537 participants according to the minimum sampling requirement.

The research instrument was developed by the researcher on the basis of literature review of the related concepts and theories for example, DSPM manual, the articles on language development promotion and the factors influencing language development. The questionnaire items were developed from the literature review in 5 parts as follows.

Part 1 Personal Characteristics: This part included 8 items in the form of multiple choice and filling in the blanks. It concerned gender, age, educational level, current occupation, monthly income, and income sufficiency for parenting children, relationship with the children, and parenting experience.

Part 2 Knowledge of Language Development Promotion: This part consisted of 19 items with 3 choices: 'correct', 'unsure', and 'incorrect'. In

scoring, 1 point was given to a correct answer, whereas 0 points were given to a wrong or unsure answer. The Kuder-Richardson reliability was at 0.8.

Part 3 Perception of Language Development Promotion: This part contained 10 items about perceived self-efficacy in language development promotion, 8 items about perceived benefits in language development promotion, and 10 items about perceived barriers in language development promotion. The items were in the 5-level rating scale: 'most', 'much', 'moderate', 'little', and 'least'. Regarding the scoring criteria, the positive items were scored as 5, 4, 3, 2, and 1 whereas the negative items were scored as 1, 2, 3, 4, and 5, respectively. The Cronbach's alpha coefficients were 0.98, 0.92, and 0.84 respectively.

Part 4 Support in Language Development Promotion: This part included 5 items about support from the health service unit, 5 items about support from communities and social networks, and 5 items about support from families. The items were in the 5-level rating scale: 'most', 'much', 'moderate', 'little', and 'least'. The scoring criteria were 5, 4, 3, 2, and 1, respectively, and the Cronbach's alpha coefficients were 0.79, 0.82, and 0.81 respectively.

Part 5 Behaviours to Promote Language Development: This part was in 20 items with the 5-level rating scale: 'always', 'often', 'sometimes', 'seldom', and 'never'. The scoring criteria were 5, 4, 3, 2, and 1 respectively, and the Cronbach's alpha coefficient was 0.93.

To collect the data, the researcher submitted a request for permission to the Provincial Public Health Office of Sukhothai Province, Tak Province, Phitsanulok Province, Uttaradit Province and Phetchabun Province from 1st – 30th

December 2021. The researchers collected the data by themselves from 537 participants and the response rate was 100% of the population. The participants' data were kept confidential and were not disclosed in the study to prevent any possible impact on the informants.

When all the questionnaires were received the researcher examined the collected data for completeness before analyzing them with a computer program by using descriptive statistics to find frequency, percentage, mean, and standard deviation. In addition, the enter regression analysis was used to study factors influencing parents' behaviours to promote the development of 1-3-year-old children with delayed language development, described following each part.

RESULTS

Part 1 Personal characteristics

Most participants were female (86.03%). Most were at the ages of 20 – 30 years (40.41%) (Mean = 34.42, S.D.= 10.289): the minimum average age was 20 years, and the maximum average age was 61 years. Regarding their highest educational level, most of them graduated with secondary education (25.14%). Their occupation was wage-workers (46.55%) with monthly income lower than 10,000 THB (75.23%) at the average monthly income of 7,924.39 THB, and their income was insufficient for their children (64.06%). The main caregivers were parents (72.81%) with 1-year parenting experience (31.10%). The average parenting experience was for 2 years: the minimum experience at 1 year, and the maximum experience at 6 years. The result details are shown in Table 1

Table 1. Numbers and percentages of participants classified according to the personal characteristics (n = 537)

Personal characteristics		Numbers	percentages
Sex			
	Male	75	13.97
	Female	462	86.03
Age			
	20-30 years	217	40.41
(Mean = 34.42, S.D.= 10.289, Min = 20, Max = 61)			
Education level			
	not studying	8	1.49
	primary education	65	12.10
	secondary education	135	25.14
	vocational certificate	102	18.99
	diploma certificate	116	21.60
	bachelor's degree or higher	111	20.67
Occupation			
	not working	43	8.01
	agriculture	98	18.25
	general employee	250	46.55
	government officer or state enterprise employees	45	8.38
	trading	101	18.81
Monthly income			
	no income	41	7.64
	less than 10,000 baht	404	75.23
	10,0001-20,000 baht	92	17.13
(Mean = 7924.39, S.D.= 5466.94, Min = 0, Max = 30,000)			
Income for feed children			
	sufficient	193	35.94
	insufficient	344	64.06
Relationship with children			
	father or mother	391	72.81
	grandfather or grandmother	111	20.67
	Relatives or babysitter	35	6.52
Parenting experience			
	1 year	167	31.10
	2 years	162	30.17
	3+ years	208	38.73
(Mean = 2.29, S.D.= 1.263, Min = 1, Max = 6)			

Part 2 Parents' Behaviours to Promote Language Development

Overall, the participants had the scores for behaviours to promote language development at the high level (94.41%). In

each aspect, their general behaviour was at the high level (89.76%); behaviours to stimulate receptive language development were at the high level (93.48%), and behaviours to stimulate expressive

language development were at the high level (94.41%) as well. The result details are shown in Table 2

Table 2. Numbers and percentages of participants classified according to the level of behaviours to promote language development (n = 537)

Behaviours	Levels	Participants	
		n	%
Overall behaviours	High	507	94.41
General behaviours	High	482	89.76
Observing children's gestures to communicate understanding	Always - Often	345	64.25
Observing children's utterances	Seldom - Never	106	19.74
Stimulation of receptive language development	High	502	93.48
Training children to follow simple instructions such as requesting them to pick something up, etc.	Always - Often	522	97.21
Teaching children to see toys and tell them the toys' names.	Seldom - Never	50	8.38
Stimulation of expressive language development	High	507	94.41
Giving chances for children to make utterances	Always - Often	508	94.60

Part 3 Factors Influencing Parents' Behaviours to Promote Language Development

In the enter regression analysis, there were 10 variables: 1) main caregivers by parents; 2) support from communities and social networks; 3) perceived self-efficacy in language development promotion; 4) ages of caregivers; 5) female caregivers; 6) support from families; 7) support from the health service unit; 8) occupation as government or state

enterprise officers; 9) perceived barriers in language development promotion, and 10) grandparents as caregivers. All these variables co-explained parents' behaviours to promote the language development of 1-3-year-old children with delayed language development at 49.8% with statistical significance (P -value $< .05$). The predictive equation is written in a raw score form as follows. The result details are shown in Table 3.

Table 3. The multiple regression analysis results on factors influencing parents' behaviours to promote language development of 1-3-year-old children with delayed language development

Variables	b	SE	Beta	t	p
Parents as caregivers	10.775	1.477	0.588	7.295	<.001
Support from communities and social networks	0.840	0.069	0.394	12.120	<.001
Perceived self-efficacy in language development promotion	0.432	0.074	0.264	5.814	<.001
Ages of caregivers	0.180	0.055	0.227	3.248	.001

Variables	b	SE	Beta	t	p
Female caregivers	5.292	0.908	0.225	5.827	<.001
Support from families	0.489	0.092	0.194	5.333	<.001
Support from the health service unit	0.257	0.089	0.093	2.881	.004
Occupation as government or state enterprise officers	-4.002	1.381	-0.136	-2.898	.004
Perceived barriers in language development promotion	-0.147	0.035	-0.156	-4.170	<.001
Grandparents as caregivers	-4.830	2.446	-0.193	-1.975	.049

Constant (a) = 24.851, R square = 0.498, Adjusted R square = 0.479, F = 25.636, p-value <.05

DISCUSSION

Main caregivers: The results showed that the main caregiver was the parents, father or mother, which was a positive factor influencing behaviours to promote language development. Relationship between parents and children occurs from pregnancy until birth, according to the attachment theory, in the form of touches, eye contact, utterances, smells, warmth, body movement, hugs, and smiles, leading to stronger relationships between parents and children.^{1,5} This is consistent with other studies which found that parents as caregivers have greater effects on children's development levels than grandparents or relatives as caregivers by 20.158-fold.¹² In addition, doing activities together with parents such as naming letters, reading simple words, or following instructions, etc., also has an effect on the possibility to have higher development than when doing activities with others.¹

Support from communities and social networks: The results showed that support from communities and social networks was a positive factor influencing behaviours to promote language development. Communication process and instruments were related to people's behavioural changes in terms of personal factors.¹⁷ This is consistent with other studies in which basic factors in social science such as social networks and suggestions from other people have a

positive relationship with mothers' parenting behaviours at the statistical significance level of 0.01.¹⁵

Perceived self-efficacy in language development promotion: The results showed that perceived self-efficacy was a positive factor influencing behaviours to promote language development. This factor in this study was found at a high level, so the activities were beneficial for the language development of 1-3-year-old children with delayed language development. According to Bandura's theory,¹⁸ a person's self-belief or self-efficacy can determine behaviours to meet the set goals. This is consistent with other studies where self-efficacy can co-predict main caregivers' behaviours to promote the development of toddlers ($b=0.340$, $p<0.01$),¹⁹ and can co-predict parents' behaviours to promote early childhood development ($b=0.377$, $p<0.01$).²⁰

Ages of caregivers: The results showed that the ages of caregivers were a positive factor influencing behaviours to promote language development. In this study, the average age of the main caregivers was 34 years, so the main caregivers were ready for child development promotion.²¹ With mothers at the ages of 20 – 35 years, children have more chance to develop properly than with mothers of other age ranges⁸ because mothers' ages are related to suspected development delay in early childhood. Therefore, mothers are encouraged to

become pregnant in a suitable proper age range.²²⁻²³

Female caregivers: The results showed that the female caregivers were a positive factor influencing behaviours to promote language development. Most caregivers in this study were females. The relationship between mother and child is important for child development since the interaction between mother and child is the most important factor for stimulating child development and learning.²⁴ Arranging learning activities with the participation of mothers and children is likely to have a greater effect on child development than with the participation of fathers and children, especially in reading together or storytelling.¹ This is consistent with other studies where 69.5% of mothers and mothers' knowledge of child development has effects on child development.¹⁶

Support from families: The results showed that support from families was a positive factor influencing behaviours to promote language development. Interaction to help each other is a part of support from families concerning skills and abilities to do duties in an effective way.^{2 5} This is consistent with other studies which found that support from families has a positive relationship with caregivers' behaviours to promote the development of pre-term infants at the statistical significance level of 0.05.¹³

Support from the health service unit: The results showed that the support from the health service unit was a positive factor influencing behaviours to promote language development. The child development promotion clinic in the health service unit follows up and stimulates language development monthly focusing on the advancement of children with delayed language development. It regularly gives suggestions and convinces parents to promote language development for 1-3-year-old children with delayed

development, and reappoints them for a follow-up.⁴ This is consistent with other studies that found that the influence of public health personnel has positive effects on caregivers' behaviours to promote early childhood development at the statistical significance level of $p < 0.01$.²⁶

Occupation of government or state enterprise officers: The results found that the occupation of government or state enterprise officers was a negative factor influencing behaviours to promote language development, because the officers have to work at least 8 hours during the day so they cannot spend time effectively promoting child language development. According to the Department of Health, caregivers during the day were other people, not mothers (55.1%). Caregiving by other people such as fathers (83.5%) and relatives or wage-workers (98.0%) does not involve joining school activities to gain and apply knowledge for child development promotion.²³

Perceived barriers in language development promotion: The results found that the perceived barriers were negative factors influencing behaviours to promote language development. According to Pender's theory,²⁷ if a person perceives barriers, that person will avoid such behaviours. This is consistent with other studies which found that perceived barriers have a negative relationship with the main caregivers' or caregivers' behaviour to promote child development at the statistical significance level of $p < 0.01$.^{13,26}

Grandparents as caregivers: The results found that the grandparents were negative factor influencing with behaviours to promote language development. Antenatal clinics or child development promotion clinics mostly focus on parents to join activities in order to achieve positive effects on behaviours to prevent child language underdevelopment, and to stimulate child development correctly and

regularly. Development promotion depends on the quality of caregivers with sensitivity to children's needs and expression, with systematic response according to their ages.²⁸ This is consistent with other studies that found that caregivers at the age of over 60 years has a negative relationship ($b=-2.207$, $p<0.01$) with the development of 3-5-year-old children. Parents as caregivers have more positive effects on child development than grandparents as caregivers by 20.158-fold.¹⁶

Perceived benefits in language development promotion: The results found that the perceived benefits were a positive factor influencing with behaviours to promote language development. As the parents have perception at the high level, they do various activities beneficial for language development of 1-3-year-old children with delayed development. According to Pender's theory,²⁷ a personal belief or perception with expectation for benefits after doing something is reinforcement for motivating that person to perform such behaviours. This is consistent with other studies where perceived benefit has a positive relationship with caregivers' behaviours to promote toddlers' growth and development at the statistical significance level of $p < 0.001$.²⁹

The limitations of this study were focused on factors of interest at the moment period. However, the factors can change according to the situation in the future.

CONCLUSION

The study was conducted to investigate behaviours and factors influencing parents' behaviours to promote the language development of 1-3 years old children with delayed language. The 537 samples were used for purposive sampling in the study, consisting of main caregivers of 1-3-year-old children with delayed language development. Researchers collected data through a questionnaire developed from the literature review in 5

parts as follows, personal characteristics, knowledge of language development promotion, perception of language development promotion, support in language development promotion and behaviours to promote language development.

The results of the study found that most participants were female, with the ages of 20 – 30 years, their highest educational level with secondary education, the occupation was working for hire, and their income was insufficient for their children, the main caregivers were parents with 1-year experience. The participants had behaviours to promote language development at the high level. The factors influencing parents' behaviours to promote the language development of 1-3-year-old children with delayed language development are parents as main caregivers, support from communities and social networks, perceived self-efficacy in language development promotion, ages of caregivers, female caregivers, support from families, support from the health service unit, occupation as government or state enterprise officers, perceived barriers in language development promotion, and grandparents as caregivers with statistical significance ($P\text{-value} < .05$). The study should be based on the model of language development promotion for parents of 1-3-year-old children with delayed language development to assess the effectiveness of parents' behaviours to promote language development of 1-3-year-old children with delayed language development in the future.

RECOMMENDATIONS

Importance should be given to the main caregivers by parents, and support from the health service unit, communities and social networks, and families. Perceived self-efficacy in language development promotion should be promoted whereas perceived barriers in

language development promotion should be reduced. These factors can affect parents' behaviours to promote the language development of 1-3-year-old children with delayed language development.

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