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ORIGINAL ARTICLE

## Effects of “Parental Involvement” on Infants Delay in Eating and Speaking Functions

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### ABSTRACT

Kataoka points out changes in the circumstances surrounding young children, particularly the time spent the media, such as television and smartphones, may negatively affect infants' speaking functions. In this study, it was investigated the effects of "Involvement of the parents" and "Time spent watched the media" on infants "Have or haven't delay in eating function" and "Have or haven't delay in talking function". In addition, this study aimed to clarify whether there is a relationship between "Delay in eating function" and "Delay in speaking function" in infants.

Twenty-three children (13 boys and 10 girls, mean age  $30 \pm 9.1$  months) attending a nursery school (Yamaguchi prefecture) were studied. The results showed that "The time spent watched the media" was significantly longer in the group have delay speak than in the group haven't delay. The score of "Talking" in parent's involvement was significantly lower in the group have delay language comprehension than in the group haven't delay language comprehension. the results of logistic regression analysis suggested that the time spent watched the media had an impact on delay in speaking function. In conclusion, he responsive relation with the person who is close rather than the one-way information through the electronic device is important for "Speaking function".

<Key-words>

Infants, delay in eating function, delay in speaking function, parent's involvement

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## I. Introduction

In present, language is delayed in many of the issues pointed out in the 3-year-old children's health examinations conducted in municipalities for children between the ages of 3 and 4 years.<sup>1)</sup> Oral dysfunction is defined a condition in which eating function, speaking function, or other functions are not well developed or these functions are not stereotypically acquired.<sup>2)</sup> In the field of dentistry, the eating function such as feeding and swallowing exercises has been actively checked. The speaking function has been checked only for some dysarthria, only limited efforts have been made at present. Evaluation of oral function in infancy and toddlerhood has great interindividual variability in the process of development and acquisition. It is not easy to accurately identify which stage each child is in.

According to the Child Welfare Act in Japan, toddlers refer to the period from 1 year of age to primary school, early childhood is the period of language gain in addition to the period of weaning food completion. It has been reported that communicating with the mother and child during the infant's prelinguistic period is the basis for the infant to speak words,<sup>3)</sup> and it has been pointed out that the function of the oral cavity, including the speaking function, in children is crucial in terms of the growth and development of mind and body. Hoshiyama (2011) pointed out that gesture plays a key role in the development of speaking function, and situation in which gesture can be expressed, that is, an environment that involves others (such as parents) is essential.<sup>4)</sup> The "Speaking function" of infants is very important in interacting with others and acquiring sociality. In addition, the reading to infants is very important in interacting with others and acquiring sociality. Kawai, Takahashi and Furuhashi (2008) regard to point out that reading to children may lead to development.<sup>5)</sup> Furthermore, it has also been reported that reading aloud to young children develops rhythm and tempo, and that this influences later "Speaking functions".<sup>6)</sup> Kataoka(2005; 2020) points out changes in the circumstances surrounding young children, particularly the time spent the media, such as television and smartphones, may negatively affect infants' speaking functions.<sup>7)8)</sup> Then, such a word delay as a "new type of word delay" and alarms that it is increasing in recent years.<sup>7)</sup> Mizuno and Tokuda (2020a; 2020b) investigated the impact of smartphone use on young children's language development and noted that the ability of younger children to communicate unforeseen events in language may not be fostered by excessive reliance on visual information about smartphones.<sup>9)10)</sup> Sato(2018) points out that media contact may deprive the time required for growth and development, as longer time spent watched the media is negatively correlated with the time for pictorial, musical, and toy play and the time involved with parents and siblings.<sup>11)</sup>

Considering the indications of these previous studies, in this study, it was investigated the effects of "Involvement of the parents" and "Time spent watched the media" on infants "Have or haven't delay in eating function" and "Have or haven't delay in talking function". In addition, this study aimed to clarify whether there is a relationship between "Delay in eating function" and "Delay in speaking function" in infants.

## II. Methods

### 1. Subjects of survey

It was explained to the guardian of the 1~3-year-old infants who enrolled in the company-led nursery school in Yamaguchi prefecture, and 23 cases of infants was obtained (13 boys and 10 girls mean age of  $30 \pm 9.1$  months).

### 2. Questionnaire and process

Questionnaire was carried out for the parents of the subject. A total of 8 items were asked about parents: two items related to "the daily condition" of infants, one item related to "the hours of use of televisions" and five items related "Parents involvement" (Table 1).

< Table 1 > Question items about parent involvement

Items related to daily conditions (1 point: not at all, 2 points: occasional, and 3 points: constant)	
1.	Has your child often unevenness of eating or not eating?
2.	Has your child spent a lot of time mumbling?
Items related to the involvement with parents (1 point which is seldom applicable, 2 points which may be applicable, and 3 points which are applicable).	
1.	Have daily reading with your child?
2.	Have daily eating with your child?
3.	Have daily talking when your child doing something?
4.	Have daily singing with your child?
5.	Have daily playing music with your child?
6.	How many hours a day your child watch TV, DVDs and smartphones?

It was conducted using "Speak" and "Language comprehension" from the Enjoji method (2009) infant analytical development test chart, in order to evaluate a "Speaking function" of the subject in the nursery school.<sup>12)</sup> And questionnaire was conducted in writing to the childcare professionals on the observable items in the childcare school by referring to the thought on oral dysfunction development disease by the Japanese Dental Association (Table 2).<sup>2)</sup>

< Table 2 > Children's Interview Questionnaire 2 for childcare professional  
(Checklist for Oral Dysfunction by the Japanese Dental Association)

Eating (Before starting baby food.)		Check
1.	The child has taken breastfeed too long time.	<input type="checkbox"/>
2.	The child is variation in the amount and frequency of feeding.	<input type="checkbox"/>
3.	The child can't hold up its own head.	<input type="checkbox"/>
4.	The child pushes spoon out with tongue.	<input type="checkbox"/>
Speaking (Before starting baby food.)		Check
1.	The child does not close his mouth when resting.	<input type="checkbox"/>
Eating (After starting baby food)		Check
1.	The child has taken chewing time too long or too short.	<input type="checkbox"/>
2.	The child chews only on the right/left side of a mouth.	<input type="checkbox"/>
3.	The child is sticking out tongue.	<input type="checkbox"/>
4.	The child is variation in the amount and frequency of eating.	<input type="checkbox"/>
Speaking (After starting baby food)		Check
1.	The child does not close his mouth when resting.	<input type="checkbox"/>

### 3. Evaluation Criteria

#### 1) "Delay in Speaking function"

"Speaking function" was evaluated using two items of "Speak" and "Language comprehension" in the Enjoji method infant analytical development test chart (2009).<sup>12)</sup> The achievement of the children to be examined was compared with the developmental items of the same age listed on the standard of examination. A case where the attainment item reached one stage below the developmental item was defined as "Haven't delay in speaking function". If the achievement item had reached only two stages below the developmental item, it was defined as "Have delay in speaking function". The same criteria were judged as "Have or haven't delay in language comprehension".

The Enjoji method infant analytical development test chart is originally used to screen infants and toddlers for developmental levels and is not diagnostic. Although this study should not be the purpose of making the diagnosis, and precisely it should be described as "possible delay" or "tending to be delayed," a definitive expression was used for convenience as "Have or haven't delay in", to avoid the complexity in the notation.

#### 2) "Delay in Eating function"

It was defined as "there is a problem with the function of eating", if it was checked three points (frequently) for any of the following two items: "Question items to parents" or "Eating" in the Children's Interview Questionnaire two for the childcare professionals. Other cases were defined as "no problem in eating function".

### 4. Statistical analysis

The Easy R (EZR) was used for all statistical analyses. EZR is a statistical software that extends the functions of the R and R commanders. Group comparisons were performed using Mann-Whitney U test for the relationship between "Time spent watched the media", "Speaking function" and "Eating function". The subjects were divided into three pairs: "Have or haven't delay in speaking function", "Have or haven't delay in language comprehension", and "Have or haven't delay in eating function". The time spent watched the media was analyzed as twenty-one participants because there were two cases of missing data.

It was analyzed the relationship between "Parental involvement" and "Speaking function" and "Eating function". A comparative test was performed using Mann-Whitney U test between the two groups "Have or haven't delay in speaking function" regarding the scores for each item of "Involvement of parents". Comparisons between the two groups were similarly performed using Mann-Whitney U test for "Have or haven't delay in language comprehension" and "Have or haven't delay in eating function". A logistic regression analysis was conducted on the relationship of the influencing factors on delay in speaking function, using the dependent variables as six items: "Have or haven't delay in speaking function", "Have or haven't delay in eating function", "The time spent watched the media", "Singing (Involvement of parents)", "Reading (Involvement of parents)" and

"Talking (Involvement of parents)".

The independent variables were determined by considering the likelihood ratio and multicollinearity. Fisher's exact test was used to determine whether or not there is a significant association between have and haven't delay in speaking function, and have and haven't eating function. And also, it was performed for the two groups "Have or haven't delay in language comprehension" and the two groups "Have or haven't delay in eating function".

### 5. Ethics

Based on the Declaration of Helsinki, this study was carried out by preparing a protocol describing appropriate academic and ethical considerations and obtaining the approval of the Ethical Review Board of the University (No.1108-06).

## III. Results

### 1. Subject characteristics

The subjects were twenty-three children (13 boys and 10 girls, mean age  $30 \pm 9.1$  months) (Table 3). The average age was five subjects (3 boys and 2 girls) for one-year-old children, ten subjects (4 boys and 6 girls) for two-year-old children, and eight subjects (6 boys and 2 girls) for three-year-old children.

It was ten subjects (43.5%) in "Have delay in speaking function" group and thirteen (56.5%) in the "Haven't delay in speaking function" group. There were three subjects (13.0%) in the "Have delay in language comprehension" group and twenty (87.0%) in the "Haven't delay in language comprehension" group. There were 10 subjects (43.5%) in the group with "Have delay in eating function" and thirteen subjects (56.5%) in the group with "Haven't delay in eating function". "The time spent watched the media" on weekdays averaged  $1.77 \pm 0.98$  hours/day.

< Table 3 > Characteristics of the participants

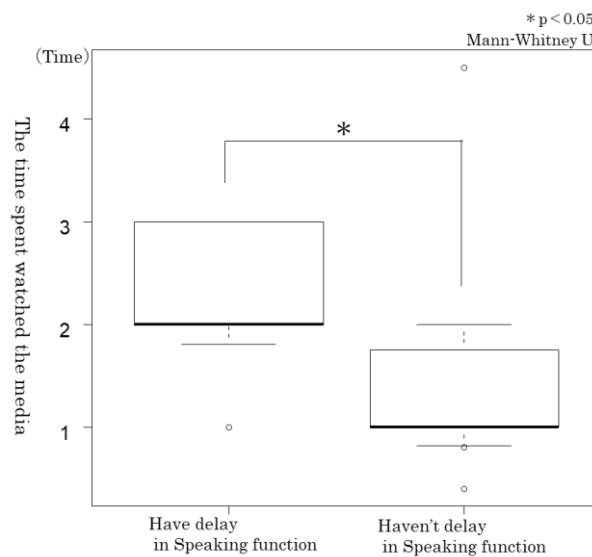
Total, n		23
Number, n(%)	1-year-old (12 to 23 months)	5 (21.7)
	2-year-old (24 to 35 months)	10 (43.5)
	3-year-old (36 to 47 months)	8 (34.8)
Age± SD		2 years 6 months ± 9.1
Delay in speaking function, n(%)	have	10 (43.5)
	haven't	13 (56.5)
Delay in language comprehension, n(%)	have	3 (13.0)
	haven't	20 (87.0)
Delay in eating function, n(%)	have	10 (43.5)
	haven't	13 (56.5)
The time spent watched the media, hours/day, mean± SD		1.77±0.98

SD; Standard Deviation

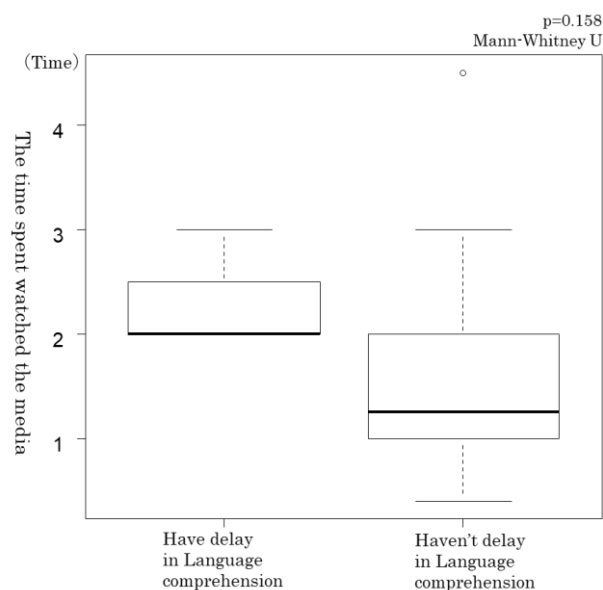
**2. Relationship between "The time spent watched the media" and each group**

Figure 1 shows the results "The time spent watched the media" between two groups have and haven't delay of speaking function. "Time spent watched the media" was significantly ( $p < 0.05$ ) longer in the "Have delay of speaking" group than in the "Haven't speaking delay" group (Figure 1).

Figure 2 shows the results "The time spent watched the media" between two groups have and haven't delay in language comprehension. The results showed that there was no significant difference between the two groups "Have or haven't delay in language comprehension" (Figure 2).



< Figure 1 > "Have or haven't delay of speaking function" and "the time spent watched the media"

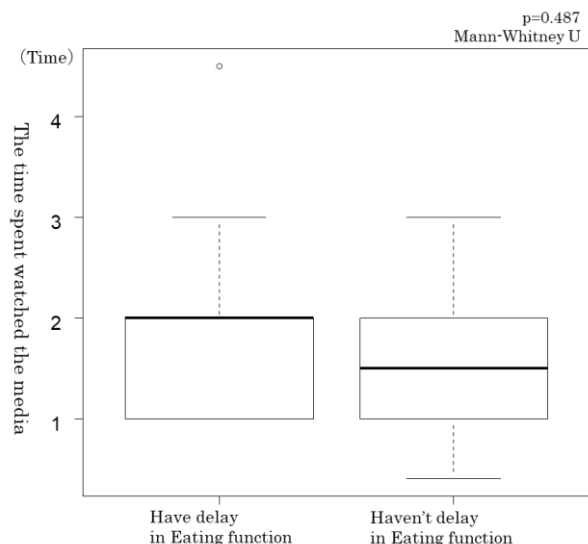


< Figure 2 > "Have or haven't delay in language comprehension" and "the time spent watched the media"



**3. Results for "The time spent watched the media" and "Have or haven't delay in eating function"**

Figure 3 shows the results "The time spent watched the media" between two groups have and haven't delay of eating function. The results showed that there were no significant differences between the two groups (Figure 3).



< Figure 3 > "Have or haven't delay in eating function" and "the time spent watched the media"

**4. Results of "Involvement of parents", "Have or haven't delay in speaking function" and "Have or haven't delay in speaking eating function"**

Table 4 shows the results "Involvement of parents" between two groups have and haven't delay of speaking function. A comparison (Mann-Whitney U) between the two groups "Have or haven't delay in speaking function" on the five items related to "the involvement of parents" revealed no significant differences in any of the items (Table 4).

The results showed that about "Talking", the group "Have delay in language comprehension" was significantly lower than the group "Haven't delay in language comprehension" ( $p < 0.01$ ). There was no significant difference between the two groups in other items (Table 5).

A comparison (Mann-Whitney U) between the two groups were made for "Have or haven't delay in eating function" on the five items related to "the involvement of parents" revealed no significant differences in any of the items (Table 6).



< Table 4 > Relationship with "Involvement of parents" and "Have or haven't delay in speaking function"

		Delay in speaking function	Min	25%	Med	75%	Max	p value
Involvement of parents	Reading	have	1.00	2.00	2.00	3.00	3.00	0.20
		haven't	2.00	2.00	3.00	3.00	3.00	
	Singing	have	1.00	2.25	3.00	3.00	3.00	0.75
		haven't	1.00	3.00	3.00	3.00	3.00	
	Talking	have	2.00	3.00	3.00	3.00	3.00	0.49
		haven't	1.00	3.00	3.00	3.00	3.00	
	Finishing polish	have	1.00	3.00	3.00	3.00	3.00	0.90
		haven't	1.00	3.00	3.00	3.00	3.00	
	Eating with parents	have	1.00	3.00	3.00	3.00	3.00	0.89
		haven't	1.00	3.00	3.00	3.00	3.00	

Mann-Whitney U test

< Table 5 > Relationship with "Involvement of parents" and "Have or haven't delay in language comprehension "

		Delay in language comprehension	Min	25%	Med	75%	Max	p value
Involvement of parents	Reading	have	2.00	2.00	2.00	2.50	3.00	0.68
		haven't	1.00	2.00	2.00	3.00	3.00	
	Singing	have	1.00	1.50	2.00	2.50	3.00	0.09
		haven't	1.00	3.00	3.00	3.00	3.00	
	Talking	have	2.00	2.00	2.00	2.50	3.00	0.01**
		haven't	1.00	3.00	3.00	3.00	3.00	
	Finishing polish	have	3.00	3.00	3.00	3.00	3.00	0.64
		haven't	1.00	3.00	3.00	3.00	3.00	
	Eating with parents	have	2.00	2.50	3.00	3.00	3.00	0.63
		haven't	1.00	3.00	3.00	3.00	3.00	

\*\*p<0.01, Mann-Whitney U test

< Table 6 > Relationship with "Involvement of parents" and "Have or haven't delay in eating function "

		Delay in eating function	Min	25%	Med	75%	Max	p value
Involvement of parents	Reading	have	1.00	2.00	2.00	2.75	3.00	0.10
		haven't	1.00	2.00	3.00	3.00	3.00	
	Singing	have	1.00	3.00	3.00	3.00	3.00	0.68
		haven't	1.00	2.00	3.00	3.00	3.00	
	Talking	have	2.00	3.00	3.00	3.00	3.00	0.64
		haven't	1.00	3.00	3.00	3.00	3.00	
	Finishing polish	have	1.00	3.00	3.00	3.00	3.00	0.90
		haven't	1.00	3.00	3.00	3.00	3.00	
	Eating with parents	have	1.00	3.00	3.00	3.00	3.00	0.89
		haven't	1.00	3.00	3.00	3.00	3.00	

Mann-Whitney U test

**5. Results of influencing factors on delayed speak**

In this study, there was ten subjects confirmed "the delay in speaking function". Logistic regression analysis was conducted using "Have or haven't delay in speaking function" as the dependent variable. Five of the items related to "Reading (Involvement of parents)", "Singing (Involvement of parents)", "Talking (Involvement of parents)", "Have or haven't delay in eating function" and "The time spent watched the media" as independent variables. The results showed that "The time spent watched the media" resulted in an odds ratio of 7.87 (p=0.049), suggesting the possibility of affecting "Have delay in speaking function" (Table 7).

< Table 7 > Influencing factors for "Have or haven't delay in speaking function"

	Have or haven't delay in speaking function (Dependent variable)	Odds ratio	Lower 95% CI	Upper 95% CI	p value
Involvement of parents (Independent variable)	Reading	0.017	0.000	2.170	0.100
	Singing	1.310	0.102	16.800	0.836
	Talking	1.400	0.080	24.600	0.818
	Have or haven't delay in eating function	0.077	0.002	2.440	0.146
	The time spent watched the media	7.870	1.010	61.200	0.049

Mann-Whitney U test

**6. Relationship between "Delay in speaking function" and "Delay in eating function"**

As a result, there was no significant difference between "Delay in speaking function" and "Delay in eating function"(Table 8).

< Table 8 > Tests between "Delay in speaking function" and "Delay in eating function" (n=23)

		Delay in speaking function	
		Have	haven't
Delay in eating functions	have	6(26.0%)	4(17.3%)
	haven't	6(26.0%)	7(30.4%)

p = 1.00, Fisher's exact test

**7. Relationship between "Delay in language comprehension" and "Delay in eating function"**

As a result, there was no significant difference between "Eating function" and "Language comprehension"(Table 9).

< Table 9 > Tests between "Delay in language comprehension" and "Delay in eating function" (n=23)

		Delay in language comprehension	
		Have	haven't
Delay in eating functions	have	2(8.7%)	8(34.8%)
	haven't	1(4.3%)	12(52.2%)

p = 0.56, Fisher's exact test

#### IV. Discussion

In Japan, many parents are concerned about delays in children's language and consult nurseries in the preschool area. Hayashi and Yamamoto(2015) reported that, after interviewing seven parents with a semi-structured interview method, they were noted to have a delay in their words in the one-year-old screening and three-year-old screening, and they remembered their anxiety.<sup>13)</sup> Kataoka(2005; 2020) regard to the possibility that prolonged viewing of electronic media, such as smartphones and television, may affect infants speak abilities, particularly speak.<sup>7)8)</sup> In speaking delay associated with autism spectrum disease, both speaking, language comprehension and sociality are delayed, and in speak delay associated with hearing impairment, there is a delay in speaking function and language comprehension. However, Kataoka(2005) said that the most common language delays in recent years are "Delay of speaking" in many cases, and that they represent "Delays in new types of words" due to the time spent watched the media.<sup>7)</sup> In the results of this study, ten out of twenty-three infants tended to be delayed in speaking. And language comprehension was investigated, and it was found that there was a tendency of delay in language comprehension among the three individuals. In addition, the questionnaire was carried out on the watching hour of the media such as television and DVD including the smartphone, and the relevance to "Delay in speaking function" was investigated. In this study, "Have delay in speaking function" group compared to the "Haven't delay in speaking function" group had longer time spent watched the media.

Moreover, no significant difference in "the time spent watched the media" was found between two groups have and haven't the delay in language comprehension. Regarding "language comprehension", it is considered that the influence of children's personality is larger than that of environmental factors around them. This resulted in agreement with the new type of language delay reported by Kataoka(2005).<sup>7)</sup> The use of electronic devices such as smartphones is expected to expand increasingly in the child care setting for infants, but it is necessary for persons involved in childcare to fully understand not only their benefits but also their negative effects and provide information to their parents.

In order to investigate whether "the involvement of parents" has any effect on the function of "Have or haven't delay in speaking function", items obtained by questionnaire to parents were assessed by one to three points. In this study, there was no item which recognized the significance especially between two groups have and haven't the delay in speaking function". Since many parents check three points to all items, it is likely that there was no difference between have and haven't delay in speaking function groups. In the future, it is necessary to set the evaluation standard, which is easy to grasp the actual condition more easily on the questionnaire of the parents. Analysis of differences between the two groups have and haven't the delay in language comprehension were similarly performed on five items related to "the involvement of parents". The results suggested that the group "Have delay in language comprehension" had fewer talking involvement of

parents than the group "Haven't delay language comprehension". Morooka (2005) regard that the lack of mother's speech rarely causes language delay in children, with the exception of special cases.<sup>14)</sup> It was speculated that small number of "Talking" may have resulted from poor children's responses to their parents' daily talking, rather than delaying "Language comprehension" due to the small number of "Talking" to children. but the interpretation of the results seemed to require further investigation. Logistic regression analysis was carried out with "The involvement of parents", as independent variables in addition to "The time spent watched the media". Independent variables were five of the items related to "Reading (Involvement of parents)", "Singing (Involvement of parents) ", "Talking (Involvement of parents)", "Have or haven't delay in eating function" and "The time spent watched the media" as independent variables. The choice of independent variables was determined by considering the likelihood ratio and multicollinearity. The results showed that "The time spent watched the media" had an odds ratio of 7.87, suggesting that it was an influencing factor for "Have delay in speaking function". The nursery school childcare guidelines in Japan also mention the importance of responsive relation and speaking with the person who is close.<sup>15)</sup> For infants and toddlers, this result also showed that the responsive relation with the person who is close rather than the one-way information through the electronic device is important for "Speaking function". Regarding "Have or haven't delay in eating function", no significant difference was observed between the two groups in terms of "The time spent watched the media" and five items related to "the involvement of parents". Generally, "Eating function" can be analyzed objectively by measuring lip closing force, oral diadochokinetic, tongue pressure, and masticatory function. Sakamoto, Moriwaki and Yamakawa et al.(2020) investigated the frequency of pronunciation, tongue muscle strength, lip closing ability, and eating quantity in order to analyze the relation between articulation function and eating function of young children.<sup>16)</sup> However, because the children surveyed this time were one-to-three year-old infants, it was difficult to investigate by direct interventional measurement methods, so only the results from questionnaires to parents and childcare workers could be obtained. Indeed, it has been difficult to rigorously assess whether there are any functional tasks regarding the eating functioning of participants. In the case of infants, it is likely that the investigative actions themselves will affect the results, so it is often to take the method of observation, but what indicators are more objective and appropriate is a challenge in the future. "Speaking function" and "Eating function" also share the oral organ. Functioning itself is quite different, but peripheral nerves and muscles are often shared. In infancy, the sucking reflex is shifted to the masticatory movement by the start of the weaning diet. At this time, it was hypothesized that nerves and muscles around the oral cavity, such as lips, tongue, and orbicularis oris muscle, would develop, allowing more fine movements, which might play a role as preparatory movements for "Speaking". Then, the analysis between "Speaking function" and "Eating function" was also carried out in this investigation. "Have and haven't delay in speaking

function" groups and "Have and haven't delay in eating function" groups were performed using fisher's exact test, and no significant differences were found. Similarly, fisher's exact test was also used in the two groups "Have or haven't delay in language comprehension" and the two groups "Have or haven't delay in eating function", but no significant differences were found. In this study, it was not possible to recognize the relation between "Speaking function" and "Eating function". As mentioned above, it is speculated that "Eating function" of infants may be due in part to difficulties in assessing and accurately grasping. Language comprehension has profound effects not only on its significance as a communication with others, but also on thoughts inside the self. In the future, it seems to be necessary to investigate longitudinally using the scale which can objectively grasp the developmental stage of an infant, and to analyze the change over time in order to analyze the process and influencing factor of "the language ability acquisition.

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### References

- 1) Ministry of Health, Labour and Welfare. Awareness and support manual for children with mild developmental disabilities, Chapter 3 Actual medical checkups and developmental consultations. [https://www.mhlw.go.jp/bunya/kodomo/boshihoken/07/7\\_03a.html](https://www.mhlw.go.jp/bunya/kodomo/boshihoken/07/7_03a.html) (cited 2022 September 20)
- 2) Japanese Association for Dental Science. Basic Concept of Oral dysfunction (Revised on March 31, 2022). <https://www.jads.jp/basic/pdf/document-220512-1.pdf> (cited 2022 September 20)
- 3) Sueko Toda. A Study of language acquisition and the development in infancy. *Kushiro Ronshu, Journal of Hokkaido University of Education at Kushiro*. 2005, 37, 101-108.
- 4) Yu Hoshiyama. A Study on Language Development in the Childhood: Association between Gesture and Vocabulary. *Departmental Bulletin Paper of Tokyo Woman's Christian University, Studies Language and Culture*. 2011, 20, 88-104.
- 5) Tsutae Kawai, Tomoko Takahashi & Estuko Furuhashi. Parental communication with children by using picture book. *Bulletin of the Faculty of Social Welfare*. 2008, 16, 83-96.

- 6) Reiko Sasaki. Kodomo no Rhythm to Ugoki no Hattatu (in Japanese). *Journal of the Society of Biomechanisms*. 2012, 36(2), 73-78. DOI: 10.3951/sobim.36.73
- 7) Naoki Kataoka. Terebi ga tsukuru kotoba okure -kotoba ga shaberena, tomodachi to asobenai, sugu kireru, ta dou- (in Japanese). *Health and Behavior Sciences*. 2005, 3(2), 115-121. DOI: 10.32269/hbs.3.2\_115
- 8) Naoki Kataoka. *Kotoba no okure ga kaizen suru houhou* (in Japanese). 2020, Gendai Shorin, Tokyo.
- 9) Tomomi Mizuno & Katsumi Tokuda. Sumaho shiyo ga yoji no gengo hattatsu ni oyobosu eikyou (in Japanese). *Telecommunications Advancement Foundation Research Investigation Grant Report*. 2020, 35, 1-11.
- 10) Tomomi Mizuno & Katsumi Tokuda. Appropriate Usage of Smartphone by Infants -- Frequency of smartphone usage and its relevant factors. *The Asian Journal of Child Care*. 2020, 10, 15-24.
- 11) Sato Kazuo. IT no kouzai: Denshi media no kodomo e no eikyou to sono taiou (in Japanese). *The Journal of Child Health*. 2018, 77(1), 18-22.
- 12) Munenori Enjoji. *Enjoji method of analytical developmental testing of infants*. 2009, Keio University Press.
- 13) Ayako Hayashi & Yachiyo Yamamoto. Acceptance of Mothers Rearing Children with Speech Delay. *The journal of child health*. 2015, 74 (1), 171-177.
- 14) Keiichi Morooka. Diagnosis of Speech Retardation and Early Intervention. *NO TO HATTATSU*. 2005, 37(2), 131-138.
- 15) Ministry of Health, Labour and Welfare. Nursery school childcare guideline, 2017.
- 16) Naoma Sakamoto, Chinatsu Moriwaki, Yuri Yamakawa, Hiroshi Nagamitsu, Norio Koga & Shimako Abe. The Relationship of Functions Infant's Articulation and Eating. *Bulletin of Nakamura Gakuen University and Nakamura Gakuen University Junior College*. 2020, 52, 139-145.



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## CONTENTS

### ORIGINAL ARTICLES

---

- Current Status and Challenges of Interprofessional Work to Promote Independence in Excretion among Older People Requiring Care and Living in Provincial Cities;  
Focused on Roles of the Nursing College and Home Life Support services  
Yoshiko ENOMOTO, et al. p.1
- The Relationship Between Midwifery Practical Skills Evaluation and Midwifery Experience Among Young Midwives Working at Perinatal Medical Centers in Japan  
Akemi ISOYAMA, et al. p.21
- Effects of “Parental Involvement” on Infants Delay in Eating and Speaking Functions  
Takashi OKADA, et al. p.43
- Factors Related to Preparatory Behaviors for the Death of Older Women who Lost Their Husbands before Old Age  
Makiko YAMAUCHI, et al. p.56
- Experiences of the Recovery Process and Support for Patients with Schizophrenia in Japanese Psychiatric Hospitals  
Nozomi FUJISAWA p.74
- Lower-limb Aerobic Exercises Improve Physical Function in Frail Older Adults;  
A Randomized Controlled Pilot Trial  
Chaeyoon CHO, et al. p.90