

Early detection of speech delay and family factors

Lia Kurniasari, Sri Sunarti

Faculty of Health Sciences and Pharmacy,
Universitas Muhammadiyah
Kalimantan Timur, Samarinda,
Indonesia

Abstract

Speech delay is one common developmental disorders in children. The purpose of this study was to detect factors that affect speech delay in children aged 48-72 months. This quantitative research used analytical design with cross sectional approach. 159 children were chosen as samples in this study. Data analysis used chi square test. The results showed that family factors of speech delay with p value of 0.853 and factor of working mothers with p value 0.245. In this study, it can be concluded that there is no relationship between family factors and working mothers with speech delay. Parents need to give stimulation to their children so it will improve their language skills. Stimulation by using various game media will help children to practice communication skills.

Introduction

Speaking is an ability that must be possessed by every human being and each child has a different experience. Speaking is a verbal communication ability that will make it easier for someone to understand what is meant by something they want to convey. Every human being will definitely enter the stage of communicating starting from the baby whose communication model will be different from the more adult person.¹ Language progress that occurs in early childhood will become the foundation for further child development in elementary school age for their speaking abilities.^{1,2} Child at the age of 5 years has mastered nearly 800 words and preschool students aged 6 years are estimated to have learned 6 to 10 words of language every day if the ability to speak is incorrect according to the time, it is very unfavorable for children to make a good speaker.³ Based on the association of speech, speaking and listening, Americans have a speech delay of 10% which occurs in children. Meanwhile, preschool children had a percentage of 2% - 19% speech delay.⁴ The ability to speak to children and daily language usage in chil-

ren are included in the part of the speech delay. This delay will affect when the child entered the school and this also will interfere in subsequent children's literacy skills, including slow understanding of writing.^{5,6}

In fact globally, cases of speech delay are increasing. Based on the incidence of speech and language disorders are increased by 5 - 10% in elementary school children.^{7,8} In some Early Childhood Educations in the City of Banda Aceh still found children who experienced speech delays such as: slow in expressing the feelings with the sentence, speaking unclear, stuttering/slurred and difficulties in developing vocabulary in communication. This also happens in Samarinda, more than 14% of children in growth experience disruption in speech. Hurlock said that for children to know how to pronounce words correctly, and then combine them into correct sentences, then they must have a good speech model to copy. In this case the importance of the participation of parents and surrounding families who will be able to assist in the child's achievement process.⁹

In family, obviously there are parents who always work either one who works or both. Family relationships between children with parents who both work will have less time in accompanying children to play every day. Previous study stated that a good relationship between parents and children (caring, and parents' affection) facilitates the development of children's language, while bad relationships resulted in children experiencing difficulties or delays in the development of their language.^{10,11} Early detection of children's speech development will be very useful for children in the future. Parents must pay attention and be directly involved in achieving this stage of language development.^{12,13}

Materials and Methods

This study used a cross sectional approach. The sample in this study was all students who were active in Kindergarden of Darul Falah, Kindergarden of Tunas Ilmu, Early Childhood Education of Rasyiqah, and Kindergarden of Barunawati totaling of 159 children. Data collection techniques used questionnaires and then analyzed by using chi square test.

Results

In Table 1, it shows the status of mothers who worked and children who experience speech delay (42%). Meanwhile,

Correspondence: Lia Kurniasari, Faculty of Health Sciences and Pharmacy, Universitas Muhammadiyah Kalimantan Timur, Jl. Ir. H. Juanda No 15 Samarinda Kalimantan Timur 75243, Indonesia.

Tel.: +62.541.748511 - Fax: +62.541.766832
E-mail: liakesmas@umkt.ac.id

Key words: speech delay, preschool children development.

Acknowledgments: The author would like to thank the Kemenristekdikti the funding sources and the opportunities given for conducting this research and for schools especially kindergarden Tunas Ilmu and PAUD Rasyiqah. Thanks to the Kindergarden School that took part in this research, thanks to the Research and Technology Ministry in providing research funding assistance, LPPM UMKT and Parents in this research.

Contributions: the authors contributed equally.

Conflict of interest: the authors declare no potential conflict of interest.

Funding: the work was supported by Kemenristekdikti grant.

Clinical trials: the study is not involved any clinical trials.

Conference presentation: part of this paper was presented at the 3rd International Symposium of Public Health, 2018 October 31 - November 1, Universitas Airlangga, Surabaya, Indonesia.

Dedication: the article is dedicated to Faculty of Health Sciences and Pharmacy, Universitas Muhammadiyah Kalimantan Timur.

Received for publication: 28 July 2019.

Revision received: 9 September 2019.

Accepted for publication: 15 October 2019.

This work is licensed under a Creative Commons Attribution NonCommercial 4.0 License (CC BY-NC 4.0).

©Copyright: the Author(s), 2019
Licensee PAGEPress, Italy
Journal of Public Health in Africa 2019; 10(s1):1212
doi:10.4081/jphia.2019.1212

mothers who did not work had children with speech delay of 32% with p Value showed 0.245 which means that there is no relationship between mothers working with speech delay in children.

In Table 2, it shows a family history that has a history of speech delay had children with speech delay of 38%. Meanwhile, families who did not have a history of speech delay, they will have children with speech

Table 1. Status of mothers who work with children who experience speech delay.

Mother status work	Speech delay		P value
	No	Yes	
Work	40 (58%)	29 (42%)	0.245
No Work	61 (68%)	9 (32%)	

Table 2. Family history of delay in talking to children who have a speech delay.

Family factors that are speech delay	Speech delay		P value
	No	Yes	
Positive	25 (62%)	16 (38%)	0.853
Negative	75 (64%)	42 (36%)	

delay of 36%. Based on the results, it showed p Value of 0.853 which means there is no relationship between working mothers with speech delay in children.

Discussion

The results of the study are related to the working status of mothers, nowadays commonly mothers have started working outside, but in this study there was no influence of working mothers with speech delay cases. This happens as mothers still have quality time to accompany their child and stimulate their children development.¹¹ The results of this study are also similar to the results of previous studies, that is a research conducted by Cheuk and Wong Sylvestre and Merette which showed no relationship between mothers who worked with children who experienced speech delay.^{9,14} Studies found that it was caregiver roles who could help talking with children while their mothers work outside so children will be motivated to learn the language.^{10,14}

In family history factors also did not have influences on the speech delay, actually the results of this study are inversely proportional to the theory that one of the factors that influence the speech delay is genetic.⁸ As the term Specific Language Impairment Consortium finds a linkage between language disorders and two separate loci on chromosomes 16 and 19. The chromosome 16 locus is associated with poor performance in word repetition tests and short-term memory. While chromosome 19 locus is associated with poor appearance on expressive language tests, but sufficient reasons can be included as the reason in this study is that large family types will affect the child's communication skills.¹⁰ On the other hand, respondents who live more than 4 people in one house, chil-

dren will have more opportunities to develop the language.¹³

Language stimulation is the activity of stimulating child's language so that children will have an optimal development. Every child needs to get regular stimulation as early as possible and continue and this could be done by mothers, fathers, caregivers, as well as their closest relatives.¹⁰ Lack of stimulation can cause permanent language disorders. Early detection of language development disorders greatly determines the value of interventions that will be given so that it will affect overall cognitive development. Screening for speech delay in toddlers influenced their school abilities and language development at the age of 8 years, it shows that screening can reduce the number of children who need special education and provide improvements in proficiency language development. At the age of 8 years only 2.7% in the group given the intervention compared with 3.7% of the control group who needed special schools.^{11,15}

Conclusions

In this study, it can be concluded that there is no relationship between family factors and working mothers with speech delay.

References

- Nelson HD, Nygren MA, Walker M, Panoscha R. Screening for speech and Language delay in preschool children: systemic evidence review of the US preventive service task force. *Pediatrics* 2006;117:293-317.
- Low J, Boyle J, Harris F, Harkness A, Nye C, Screening for speech and language delay: asystemic review of the

literature. *Health Technology Assesment* 1998;2:1-5.

- Jalongo, Mary Renck. 2007. *Early Childhood Language Arts*. USA: Pearson Education, Inc
- American Academy of Pediatrics. Committe on children with disabilities. Role of the Pediatrician in family-centered early intervention service. *Pediatrics* 2001;107:1155-7
- Soetjningsih. Perkembangan anak dan permasalahannya. Dalam: Narendra MB, Sularyo S, Soetjningsih, S uyitno H, Ranuh IG, penyunting. *Buku Ajar Tumbuh Kembang Anak dan Remaja*; Edisi I. Jakarta: Ikatan Dokter Anak Indonesia. Jakarta: Sagung Seto; 2002.
- Hurlock, Elizabeth B. (1978) *Perkembangan Anak* (terj.). Meitasari Tjandrasa dan Soejarwo. Jilid II Edisi VI. Jakarta: Erlangga
- Judarwanto W. *Keterlambatan bicara, berbahaya atau tidak berbahaya*, 2006. Didapat dari: www.childrenfamily.com
- Bishop D.V.M. What causes specific language impairment in children ? United Kingdom; Didapat dari: dorothy.bishop@psy.ox.ac.uk.
- Cheuk D.K.L, Wong V. Specific language impairment and child care by a domestic helper. *Arch Pediatr Adolesc Med* 2005;159:714-20.
- Pieramdani. "Dampak ibu bekerja terhadap perkembangan anak", 2009. Didapat dari: <http://pieramdani.wordpress.com/2008>
- M.E Heleen. A-Cluster Randomized trial of screening for language delay in toddlers: effect on school performance and language development at age 8. *Pediatrics* 2007;120:1317-25
- Simkin Z, Conti G. Evidence of reading difficulty in subgroups of children with specific language impairment. *Child language teaching and therapy* 2006;22:315-31.
- Law J, Garrett Z, Nye C. Speech and language therapy intervention for children with primary speech and language delay or disorder. *The Cochrane Library*, 2003.
- Brooks-Gunn J, Han W, Waldfogel J. Maternal employment and child cognitive outcomes in the first three years of life: the NICHD study of early child care. *Child Development* 2002;73:1052-72.
- Chaimay B, Thinkhamrop B, Thinkhamrop J. Risk factors associated with language development problems in childhood--a literature review. *J Med Assoc Thai* 2006;89:1080-6.