

# Relationship Between Maternal Parenting Style and Speech Delay in Children Aged 2-5 Years in Surabaya

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## Abstract

**Introduction:** Speech delay affects 5-8% of Indonesian preschoolers. A child's genetic potential for development is influenced not only by natural aspects, but also by nurturing aspects. Based on this, this study aims to analyze how maternal parenting styles may influence the incidence of speech delay in children.

**Methods:** This research is a correlation analysis study with a cross-sectional approach. The instrument used was the Child and Adolescent Parenting Style Questionnaire (KPAA) and medical records, taken during December 2023-February 2024. Variables included maternal parenting styles, age, education level, and employment status, as well as child gender. Results were processed using SPSS for Windows ver. 28, with Chi Square and Fisher's Exact statistical tests.

**Results:** Result showed 3 mothers (15%) had children experiencing primary speech delay, with 1 (33.3%) applying democratic parenting while the other 2 (66.7%) using permissive parenting. There were 17 mothers (85%) with children experiencing secondary speech delay, with 1 (5.9%) applying democratic parenting, while the other 16 (94.1%) using permissive parenting. Maternal average age is 31.9 years, with most educated to high school level and work actively. Statistical test revealed no significant correlation ( $p>0.05$ ) between maternal parenting style and speech delay. Neither maternal employment status nor child gender showed association with parenting style. However, maternal age and education level appeared to have a link with parenting style adopted.

**Conclusion:** No significant relationship was found between mother's parenting style and speech delays in children aged 2-5 years at the Children's Growth and Development Clinic at Dr. Soetomo General Hospital.

Keywords: Maternal parenting style; developmental disorders; speech delay; literacy skill

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## 1. Introduction

There are various risk factors behind speech delays in children, including medical and non-medical side, such as environmental and family factors [7]. Growth and development disorders in children are the result of the socio-economic and psychological conditions that surround children from an early age. Moreover, a child's genetic potential is influenced not only by natural aspects, but also by nurturing aspects [19].

Parenting style used towards children is one of the determining factors for speech delays in children [6]. Research by Muryanti *et al.* shows that there is a significant linear relationship between the type of parenting style applied and speech development. This is because the first language stimulus that children receive comes from parents and their home environment. The quality and amount of positive interaction time between mother and child, such as reading stories to children or playing, plays an important role in children's language

development [12]. Children whose parents apply contingent responding tend to have a higher understanding of phonological abilities and are skilled in understanding context of stories [15, 17]. Children with appropriate parenting styles are 20.19 times more likely to achieve good language development [12].

Baumrind [13] classifies parenting patterns into three types based on a comparison of the values of the responsiveness and demandingness dimensions: authoritative/democratic parenting (both dimensions have the same high value), authoritarian/authoritarian (responsiveness low & high demandingness), and permissive/permissive (high responsiveness and low demandingness).

A study conducted in Surakarta, Central Java, stated that democratic parenting patterns increase children's speech development more positively when compared to the other two parenting patterns [24]. Other research conducted on 25 children showed that children raised with permissive parenting had normal development patterns [9]. This difference in findings is the reason the author chose a related title.

In 2013, IDAI stated that 5-8% of preschool age children experienced the same disorder [25]. Knowing this prevalence, it is important to review one of its risk factors: maternal parenting styles and the various factors that influence it. In this study, maternal parenting styles for children in the primary speech delay (PSD) and secondary speech delay (SSD) groups will be observed. This study aims to explore how maternal parenting affects children's speech development in two different groups.

Related to the intensity of mother-child interactions, in many cases, interactions between children and working mothers often decrease, leading to stimulation of children's development being disrupted. Conversely, children whose mothers do not work have a 39.4% higher potential for increased development [3].

In addition, a study done in Central Java, Indonesia, stated that children's language development is also influenced by socio-economic status as measured by educational level. Sufficient education allows mothers to become aware of the appropriate development according to the child's age, including the stimulation and guidance needed [12].

In their research in Canada, Kim *et al.* found that apart from the mother's occupation, the mother's age also plays a role as a predictor of the mother's parenting style. It was stated that mothers who were more mature in age, educated, and received social support showed more positive parenting patterns [8]. Another study conducted in Australia stated that a higher maternal age (in the range 15-30 years) was associated with a lower risk of developmental disorders [4].

It is not uncommon to find that the sex of the child also influences the treatment of parents. Salavera *et al.* (2022) stated that permissive parenting tends to be applied to girls, while authoritarian parenting is often implemented with boys. However, apart from the type of parenting style that parents apply to their children, the acceptance and attitudes shown by children in response to that parenting style also play a role in the development process. Therefore, the things above are supporting variables whose correlation will be explored in this research.

## 2. Methods

This study used an analytical observational design with a cross-sectional approach. The population includes mothers of children diagnosed with speech delay in the growth and development poly, Dr. Soetomo General Hospital. The inclusion criteria were mothers of children aged 2-5 years, willing to be participate, and capable of reading and writing. Meanwhile, the exclusion criteria was mothers who are not the main caregiver of children. Through total sampling and based on these criteria, 20 mothers were recruited to be respondents and divided into two groups: mothers of children experiencing primary speech delay (PSD) and secondary speech delay (SSD). Types of parenting styles were assessed using the Child and Adolescent Parenting Style Questionnaire (KPAA) which classifies them into three categories; authoritarian, democratic, and permissive. Collection of data was conducted through a questionnaire-based interview with respondents, as well as

medical records, during the time period of December 2023-February 2024. Data analysis was done using bivariate analysis through Fisher's Exact Test with a significance level of 0.05. This study received ethical clearance from the Dr. Soetomo General Hospital's Health Research Ethics Committee with a reference number of 0811/KEPK/X/2023.

### 3. Results

This study obtained a total of 22 respondents who had filled out the Child and Adolescent Parenting Style Questionnaire (KPAA) from December 2023 to February 2024. Two patients were excluded due to incomplete medical record data (Table 1).

#### 3.1. Characteristics of Respondents

Table 1. Characteristics of respondents (N=20)

Category	PSD n(%)	SSD n(%)	Total n (%)
Maternal Age			
Early Adulthood	6 (37.5%)	10 (62.5%)	16 (80%)
Middle Adulthood	1 (25%)	3 (75%)	4 (20%)
Maternal Education Level			
Elementary School	1 (100%)	0 (0%)	1 (5%)
Middle School	1 (100%)	0 (0%)	1 (5%)
High School	4 (30.8%)	9 (69.2%)	13 (65%)
Higher Education	1 (20%)	4 (80%)	5 (25%)
Maternal Employment Status			
Employed	5 (45.4%)	6 (54.5%)	11 (55%)
Unemployed	2 (22.2%)	7 (77.8%)	9 (45%)
Children's Sex			
Male	6 (37.5%)	10 (62.5%)	16 (80%)
Female	1 (25%)	3 (75%)	4 (20%)
Children's Age			
2 years old	4 (50%)	4 (50%)	8 (40%)
3 years old	2 (22.2%)	7 (77.8%)	9 (45%)
5 years old	1 (33.3%)	2 (66.7%)	3 (15%)

The mean age of the respondents was 31.9 years with a standard deviation of 6.47. The predominant maternal level of education was high school, comprising 13 mothers (65%), followed by higher education / university in 5 mothers (25%). With a slight difference, the majority of the respondents are at the time actively working (55%). Whereas for the children, it is found that the mean age was 2.9 years with a standard deviation of 1.02 and most are male (80%).

### 3.2. Analysis of the Relationship Between Maternal Parenting Style and Speech Delay in Children Aged 2-5 Years

Table 2. Relationship Between Maternal Parenting Style and Speech Delay in Children Aged 2-5 Years

		Diagnosis		
		PSD	SSD	Total
Parenting Style	Democratic	1	1	2
	Permissive	6	12	18
Total		7	13	20

Based on Table 2, following the Fisher's Exact test, no significant value was obtained with the value of  $p$  being 1.000 ( $p > 0.05$ ). This result indicates that there is no difference between the relationship of maternal parenting styles in PSD and SSD group.

### 3.3. Analysis of the Relationship Between Maternal Employment Status and Parenting Style

Table 3. Relationship Between Maternal Employment Status and Parenting Style

		Parenting Style		
		Democratic	Permissive	Total
Maternal Employment Status	Employed	2	9	11
	Unemployed	0	9	9
Total		2	18	20

Based on table 3, a significance value of  $p = 0.479$  ( $p > 0.05$ ), which indicates the absence of a significant difference between how maternal employment status affects the choice of parenting style in the PSD and SSD group.

### 3.4. Analysis of the Relationship Between Maternal Education Level and Parenting Style

Table 4. Relationship Between Maternal Education Level and Parenting Style

		Parenting Style		Total
		Democratic	Permissive	
Maternal Education Level	Elementary School	0	1	1
	Middle School	1	0	1
	High School	1	12	13
	Higher Education	0	5	5
Total		2	18	20

Based on Table 4, following the Fisher's Exact test, a significance value of  $p = 0.021$  ( $p < 0.05$ ) was obtained. This result implies that there is a significant difference in how each group of educational level affects the parenting style chosen by mothers.

### 3.5. Analysis of the Relationship Between Maternal Age and Parenting Style

Table 5. Relationship Between Maternal Age and Parenting Style

		Parenting Style		Total
		Democratic	Permissive	
Maternal Age	Early Adulthood (20-39 years)	0	16	16
	Middle Adulthood (40—49 years)	2	2	4
Total		2	18	20

Based on Table 5, subsequent to the Fisher's Exact test, a significance value of  $p = 0.032$  ( $p < 0.05$ ) was obtained. This indicates that there is a significant difference in how each group of maternal age affects maternal parenting style.

### 3.6. Analysis of the Relationship Between Children's Sex and Maternal Parenting Style

Table 6. Relationship Between Children's Sex and Maternal Parenting Style

		Parenting Style		
		Democratic	Permissive	Total
Sex	Female	1	3	4
	Male	1	15	16
Total		2	18	20

Based on table 6, following the Fisher's Exact test, a result of  $p = 0.368$  ( $p > 0.05$ ) was obtained. This implies the absence of a significant difference between how children's sex being female and male affects mother's choice of parenting style.

## 4. Discussion

From both groups (PSD & SSD), 18 mothers were found to be exercising permissive parenting style, while 2 mothers applied democratic parenting. Different types of parenting chosen by mothers can be influenced by various factors which were also analyzed in this research, including: child's sex, maternal age, education level, and employment status.

The hypothesis of this research is that there is a significant difference between the relationship between maternal parenting style in children with primary and secondary speech delay. This is based on the findings of previous studies that parenting styles pose as a risk factor for children with speech delay [6, 12]. The response, control and stimulus given, as seen from the quality and amount of interaction between mother and child, are the basis of the association.

Children who are raised with a democratic parenting style have greater opportunities to explore informal literacy environments with their parents. These activities are directly related to children's skill in vocabulary-building, comprehension, and phonological awareness. Parental behavior that is warm and responsive while setting appropriate limits, assists children in exploring their abilities. Authoritarian parenting, on the other hand, narrows these opportunities with strict boundaries and minimal responses. [2]. Meanwhile, permissive parenting with excessive freedom would not provide sufficient expectations and encouragement for children to develop.

Of the 20 respondents, there were no mothers who applied authoritarian parenting style. This parenting style was the first type known and described in the academic world. However, its application has continued to change in the last fifty years, which is related to changes in society's understanding of family structure. Traditional hierarchical structure that was commonly found at the beginning of the 20th century, is now shifting into one that puts more emphasis on the importance of implementing an egalitarian nature, prioritizing equality [21].

Children who grow up in an authoritarian environment are found to be more likely to behave aggressively while being dependent because they are used to relying entirely on their parents for choices and limitations. In the research done with Iranian mothers and their children, it was found that children who are vulnerable language and speech delay are disadvantaged by authoritarian parenting, because of the minimal opportunities given to children to sharpen their abilities [27]. The lack of parental response to children's needs is an obstacle to implementing effective two-way communication, which is expected to be the foundation for children's learning and stimulation.

In the PSD group, one mother was found to apply democratic parenting style, as did the SSD group. This parenting style is considered the most ideal by Baumrind, having a balance between the two dimensions. Parents with democratic parenting style continue to enforce firm boundaries with their children while also providing appropriate attention and response to the child's needs (high limits & high warmth), which supports the formation of a secure attachment style. Children are encouraged to communicate and parents also show a willingness to listen to their children's opinions and actively discuss them [14].

However, it is worth considering that caring for a child with developmental delays can be challenging for parents. This is directly related to increasing parental stress, in addition to other factors such as economic, social and emotional. Therefore, implementing democratic parenting can be difficult to do consistently [26]. This could be the cause of the low number of mothers who apply democratic parenting in both groups.

Permissive parenting patterns dominate in both groups. This differs the previous findings [12, 24] At first glance, permissive parenting seems safer to implement; with minimum conflict and tantrums. Parents

with a permissive parenting style choose not to apply limitations that are thought to restrain their children and often let their children behave according to their wishes. Parents tend to want to be considered peers by their children, so they fail to implement firm boundaries.

These results are in accordance with the study by Van Keer *et al.* who found that parents of children who experience developmental delay tend to adopt more sensitive and responsive traits, but rarely direct their children's behavior [23]. Parents often assume that children cannot fully understand commands or have the ability to respond according to standards. Overall, the study found lower levels of parental discipline and child initiative in permissive parenting style. However, researches by Hindman & Morrison (2012), Bradley *et al.* (2001), and Mantzicopoulos (1997) in Bingham *et al.* found inconsistent results between parenting styles and children's speech development [2].

Differences in results may occur due to differences in research samples; This study used samples among children with primary and secondary speech delay, while the research on which the hypothesis was based used samples among children with normal and abnormal language development. Then, differences in instruments can also play a role.

Another factor that plays a role but is not analyzed in this research is the dynamics of the extended family outside the nuclear family. Not only parents, other figures also play a role in the family's daily life, such as grandparents, siblings or household assistants who live together in the same environment. The type of parenting style for each family member varies and affects the child in different ways. In their research, Li *et al.* found that children who were cared for intensively by grandparents tended to have internalizing and externalizing behavior problems [10]. Parenting methods and knowledge of the needs of today's children differs from how it was in the past. On the other hand, the study by Akhtar *et al.* found that the presence of grandparents will influence the overall parenting style the child receives. One example is that it can reduce the level of parental authority, so that the boundaries that parents have imposed are no longer clear [1]. Of course, the social, cultural and economic conditions of each family greatly influence interactions between family members, so further study is needed regarding how extended families play a role in the relationship between mother's parenting and child development.



In table 3, it was found that democratic parenting patterns were found in 2 working mothers. Meanwhile, permissive parenting patterns were found in 9 working mothers and 9 other mothers is unemployed. After carrying out the analysis, a p-value of 0.479 was obtained, which means that there was no significant difference between how each group of employment status affects the parenting style applied. The parenting style of working mothers which is dominated by a permissive pattern is contrary to Hoffman's findings in Tinihada & Mangunsong (2017) which explains that working mothers tend to apply democratic parenting in regards of the principles held by mothers as professional workers, which are also applied to family dynamics [20].

However, the finding that all non-working mother subjects applied a permissive parenting style is consistent with previous research [18]; a positive relationship was found between working mothers and children's level of independence, which was facilitated by democratic parenting. Another study in 2018, on the other hand, suggests that findings regarding this relationship tend to be inconsistent, with one study finding that working mothers tend to apply permissive parenting patterns, as compensation for feelings of guilt and perceived pressure due to minimal time spent with children [11].

Table 4 shows that there is a significant difference in how each education level affects maternal parenting style. However, contrary to previous research mothers with a higher level of education actually found to be applying permissive parenting style [12, 8]. While apart from knowledge of ideal parenting techniques for children, the education received by mothers can broaden the knowledge of positive coping mechanism techniques in dealing with stress that mothers may face when caring for children. To further test the results of these findings, a wider distribution of subjects is needed, considering that of the 20 subjects in this study, only 1 mother was found with an elementary school education level and 1 mother with a middle school education level.

According to age classification, there were 16 mothers in early adulthood (20-39 years) and 5 mothers in middle adulthood (40-49 years). It was found that all mothers in the young adult group applied permissive parenting style while 2 mothers from the middle adulthood group implemented authoritative parenting, while the other 3 mothers practiced permissive parenting. The analysis implies that there is a significant difference on how each age group affects the parenting style applied.

Previous research that examined three generations of families wrote that across generations, the way parents care for their children continues to change. Currently, parents tend to apply a more dominant dimension of warmth. This can be seen from the higher intensity of support and praise, while the intensity of discipline (strictness) is decreasing [5]. This could be the reason that all young adult mothers were found to apply permissive parenting style.

In table 6 it was found that there was no significant relationship between the child's sex and maternal parenting style. This is contrary to the findings of Salavera *et al.* which states that parents tend to apply permissive parenting style to girls, and authoritarian parenting style to boys [16]. However, it should be noted that the research subjects in this study were adults (average 22.01 years), and were asked to answer a questionnaire regarding the parenting patterns applied to them during childhood. Differences in subjects and research methods can underlie the differences in findings between the two.

Limitations in this study includes a relatively small sample size that couldn't fully represent the variability within the population. Hence further research with a bigger sample size is needed.

## 5. Conclusion

There were no significant differences in how different parenting styles affect speech delay in children aged 2-5 years and how various groups of maternal employment status and children's sex affects parenting styles applied. However, a significant difference was found between how different groups of maternal age and education level affects parenting styles applied by mothers.

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