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Maternal Gatekeeping in Children with Developmental Language Disorder

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ABSTRACT

Background: Based on previous studies reporting language disorders associated with maternal overload and changes in parenting practices, this study aimed to investigate maternal gatekeeping and overprotectiveness in developmental language disorder (DLD).

Methods: Forty-five children with DLD and 46 children with typical language development (TLD) children were included in this study. To assess the level of maternal gatekeeping and overprotectiveness, we employed Maternal Gatekeeping Scale (MGS) and Parent Attitude Scale (PAS). Additionally, participant's language abilities were evaluated using Test of Early Language Development-3 (TELD-3), and their overall developmental status was assessed using Denver Development Screening Test-2 (DDST-II). Immitance-metric assessment and auto-acoustic emission testing were also used to assess hearing functions.

Results: Mean PAS-overprotection (34.1 ± 8.4, 24.3 ± 5.9, $P < .001$) and MGS total scores (141.7 ± 24.1, 115.7 ± 20.5, $P < .001$) in children with DLD were significantly higher than those of the TLD. Factors affecting MGS scores were investigated using Multiple linear regression analysis. DLD diagnosis ($\beta = 14.195$, $P = .029$), PAS-overprotection ($\beta = 1.158$, $P = .001$) and family income level ($\beta = 9.643$, $P = .045$) were found as significantly associated with MGS scores. In addition, PAS-overprotective obtained to have a partial mediating role in the relationship between DLD diagnosis and MGS scores ($\beta = .391$, $P < .001$).

Conclusion: Present study reveals that maternal gatekeeping is associated with DLD and overprotection. These findings underscore the importance of evaluating motherhood practices and fostering independency supportive attitudes in the care for children with DLD.

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INTRODUCTION

Language disorders are multifactorial disorders and characterized by difficulty in comprehending conversations and expression of the thoughts with words.[1] Language difficulties occurring in development might arise due to biomedical, genetic or psychiatric causes.(The reference is hidden for blind review) However, developmental language disorder (DLD) is a term that refers to cases who had language problems emerging during the psycho-social development period, rather than being attributed to an acquired condition or known biomedical cause.[1]

It is known that parenting factors except for child abuse and neglect do not cause neurodevelopmental disorders including language disorders. Moreover, parents have roles in the management of the disorder. Therefore, supporting the parents may be needed.[2-4] Although motherhood or fatherhood do not play a role in the onset of language disorders, some parenting factors such as increased parenting stress and deterioration in parent-child interaction are reported to be associated with language disorders.[5,6] Additionally, parents have a role in interventions as part of the team. Previous studies point out family-centered approaches in managing DLD, rather than only focusing on individualized interventions.[4,7] In family-centered interventions, although the other family members take responsibility, maternal involvement is reported to be more significantly prevalent.[4]

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Personal beliefs and behaviors have a role in shaping parental role discrimination, whereby some individuals may exhibit overdependence on their parenting role. This may result in parental gatekeeping. Parental gatekeeping can be identified as the regulation of one parent's relationship with the child by the other parent.[8] Gatekeeping is not exclusive to any specific gender or a parental/caregiver figure.[9] However, previous research has suggested that maternal overload tends to be more prominent among parents of children with DLD.[4] Therefore, this study aims to investigate mainly the concept of maternal gatekeeping in the context of DLD. Maternal gatekeeping is a term that refers to the limitation of the father's involvement in family work according to the mother's thoughts, beliefs, behavior, and attitudes.[8] Maternal gatekeeping can also be identified as the mother's controlling attitudes towards the father regarding parenting.[10] The father's involvement in child-rearing is known to have positive impacts on the child's development.[11,12] Also, the paternal factors are of particular importance with direct and indirect effects on language development.[13-17] Therefore, children with DLD were selected as the sample of the study.

Overprotective parenting style is mainly characterized by a high level of supervision and control, being overly vigilant, having difficulties in separating from the child, and decreased encouragement of independent behaviors.[18] Parental protection can be considered as a natural attitude that starts as early as pregnancy and serves the purpose of ensuring the safety and well-being of the child.[19] On the other hand, over-protection was reported as positively associated with various psychiatric symptoms such as anxiety[20,21] and impaired autonomy.[22] There are factors related to both the parent[23,24] and the child such as developmental pathologies including communication problems,[25,26] and these can influence the level of parental protection. DLD is a chronic condition with changing symptoms throughout different stages of life, and children with DLD often experience limitations in psychosocial skills.[27] Also, children with DLD may have difficulty in transitioning to independency.[28] Although levels of overprotection are expected to be higher in these cases, the exact association remains to be elucidated.

In this study, it is planned to investigate maternal gatekeeping and over-protective attitudes in children with DLD and to compare with children with typical language development (TLD). We addressed the following as our hypotheses:

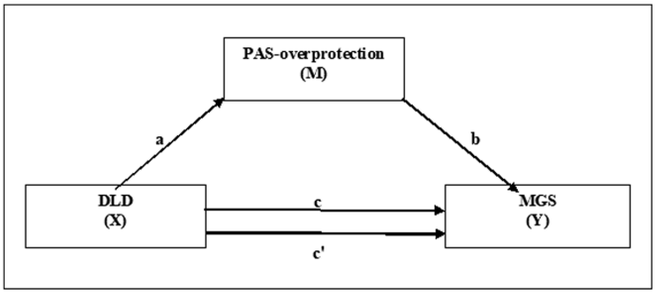
Hypothesis-1: Diagnosis of DLD is a significant predictor for an increase in maternal gatekeeping.

Hypothesis-2: Increase in maternal over-protection is a significant predictor for an increase in maternal gatekeeping.

Hypothesis-3: Maternal over-protection has a mediator role in relationship between DLD diagnosis and maternal gatekeeping. The model is represented in Figure 1.

MAIN POINTS

- Diagnosis of developmental language disorder (DLD) in children can thought to be a risk factor for an increase in maternal gatekeeping.
- Maternal overprotection is positively associated with maternal gatekeeping.
- Moreover, maternal overprotection has a partial mediator role in the association between DLD diagnosis and maternal gatekeeping.



MGS: Maternal Gatekeeping Scale
PAS: Parent Attitude Scale
DLD: Developmental Language Disorder

Figure 1. Mediation model of parent attitude scale (M) on the association maternal gatekeeping scale (X) and developmental language disorder (Y).

MATERIAL AND METHODS

Participants

This is a cross-sectional case study including 45 children participants who were diagnosed with DLD compared with 46 TLD. In both groups, the ages of the children are between 32 and 72 months.

The case group was recruited from a child and adolescent outpatient clinic in Cerrahpaşa Medical Faculty, Child and Adolescent Outpatient Clinic between May 2021 and May 2022. The cases consisted of children who were referred to the child and adolescent psychiatry outpatient clinic because no biomedical cause could be found. Cases who were diagnosed with DLD were referred to the researcher who was a child and adolescent psychiatrist. All cases were re-examined, and the DLD diagnosis was confirmed by a single specialist. Parents were informed about the aims and the methods of the study. Parents who agreed to participate in the study were evaluated by certified specialists for compliance with the inclusion criteria. Cases who were compliant with the study were recruited again to the child and adolescent outpatient clinic. Assessment tools were given to the mothers. A separated room was provided to the mothers for filling the self-report scales. Also, they were informed about how they could reach the researcher to ask questions, if any. At the end of the

evaluation, it was checked whether the forms were filled incompletely or incorrectly.

Inclusion criteria for the case group were

- being diagnosed with DLD for the first time by a child psychiatrist;
- a score of 1 SD below the median in both receptive and expressive subtest of Test of Early Language Development-3 (TELD-3). TELD-3 was developed to assess the receptive and expressive language capabilities of children between the ages of 2 and 7.[29] This instrument evaluates semantic and morphosyntax domains of language development. TELD-3 is based on direct observation of the child by a trained researcher and includes certain types of tasks that divide into 2 sub-tests which are for receptive and expressive language features. TELD-3 was adapted for the Turkish children population by Güven and Topbaş and found to be a reliable and valid instrument to evaluate language development. An SD greater than 1 or a standard score below 85 in the receptive or expressive language subtest of TELD-3 indicates language impairment; and[30]
- Being able to speak Turkish as a first and home language, which is local language.

The inclusion criterion for the comparison group was

- children aged between 36 and 72 months who were admitted to Cerrahpaşa Medical Faculty, Child and Adolescent Outpatient Clinic and not diagnosed with any psychiatric disorders or neurological diseases; these evaluations were conducted by detailed psychiatric examinations;
- being able to speak Turkish as a first and home language, which is local language; and
- not having a sibling with DLD. Obtained by mothers' statement and confirmed by medical records if available.

Exclusion criteria of the study were

A diagnosis of hearing loss; these evaluations were conducted by Immitance-metric Assessment and Autoacoustic Emission. In Immitance-metric Assessment, middle ear functions of the participants were measured with GSI Tympstar V.2 (Grason-stadler Inc. Tiger/USA) immittancemeter device. The criteria for considering middle ear function as normal is a value between -100 daPa and +50 daPa for tympanic apex pressure, and a static compliance value between 0.3 mL and 1.3 mL. Stapes reflex tests were performed at frequencies of 500, 1000, 2000 and 4000 Hz. TEOAE (Autodynamics, ILO 288/UK) Model was applied to all participants included in the case group. TEOAE measurement was evaluated in 4 frequency bands and the condition of having a normal TEOAE result in at least 3 frequencies was sought.

- bilingualism or multilingualism.
- "Abnormal" developmental level of fine motor and gross motor subtests of Denver developmental screening test two (DDST-II). The test was reported as abnormal if the developmental level was 1 year below the chronological age. Abnormal reports of DDST-II indicate risk of developmental delay. DDST-II is a formal developmental screening tool that assesses children from birth to 6 years of age.[31] The test was adapted to Turkish children;[32]
- Children with divorced or separated parents were excluded because family dynamics and parental role distributions may change in those cases.[33]
- Psychiatric diagnoses in children such as autism spectrum disorder and selective mutism that may cause language difficulties were excluded by psychiatric examination.
- Chronic disease diagnosis in children. Obtained by mothers' statement and confirmed by medical records if available.

Sixty-one children were screened for this study. Eight children were excluded because they were diagnosed with psychiatric disorders during the evaluations (2 children with autism spectrum disorder, 4 children with intellectual disability, 2 children with selective mutism). Four children's parents didn't want to continue participating in the study. One child was diagnosed with hearing impairment. Two children were determined to have a chronic diagnosis. A child's sibling was diagnosed with a chronic disease. An abnormal DDST-II was reported in 5children. As a result, a total of 21 children were excluded from the study and the case group consisted of 45 children with DLD.

The recruitment was stopped once the target number of participants was reached after applying inclusion criteria.

In both groups, the Maternal Gatekeeping Scale (MGS) and the "overprotective" subscale of the Parent Attitude Scale (PAS) were used to evaluate maternal factors.

The Declaration of Helsinki was used as the standard of medical ethics in the study design. Istanbul University-Cerrahpaşa, Cerrahpaşa Medical School Ethics Committee reviewed and approved all study materials (Approval No: 90672, Date: May 5, 2021). Informed consent was obtained from the parents of participants.

Instruments

The Sociodemographic Data Form was designed specifically for this study and was completed by participants' mothers. Questions included information on age, gender, number of children, family income, parental age, and educational level. In addition, the form asked about independence in self-care skills such as toilet cleaning, sleep, and feeding.

MGS was created by Dönmez in 2019.[10] The scale contains 5 subscales (modern motherhood, two-fold responsible motherhood, extreme dependence on motherhood,

traditional motherhood and indirect motherhood). The reliability coefficients for subscales are 0.89, 0.87, 0.85, 0.71, and 0.63, respectively. The Cronbach alpha score for the total scores is 0.90.[10] This scale includes 57 items and was filled out by the mothers. The items are scored between 1 and 5. The modern motherhood subscale assesses the level of mothers' giving opportunity to fathers in parenting. Therefore, this subscale is inversely scored; higher scores in the scale mean higher maternal gatekeeping. In the two-fold responsible motherhood subscale, it is evaluated whether mothers take on more responsibilities in child-rearing and household chores because fathers take less responsibility, from the mothers' perspective. Extreme dependence on motherhood subscale consists of items that question mothers' excessive emphasis on certain issues such as raising children, being a mother, and responsibilities towards the family. Traditional motherhood subscale evaluates the mothers' attitudes to traditional gender roles in the context of mothering. In this subscale, mothers are asked about their opinions on their partners' participation in child care and housework. The indirect motherhood subscale investigates the participant's glorification of motherhood by revealing her partner's shortcomings in parenting. Thus, MGS aims to evaluate the mother's controlling attitudes towards the father regarding parenting.[10]

PAS was developed by Demir and Şendil (2008). The scale consists of 46 items and 4 sub-dimensions concerning the parents' attitude towards the child: authoritative, authoritarian, permissive, and overprotective. In this study, only the overprotection subdimension was included in the analysis. Cronbach's alpha coefficient of the overprotective dimension is 0.75.[34]

Statistical Analysis

Statistical analysis was conducted using the IBM Statistical Package for the Social Sciences (SPSS) version 22.0 (IBM SPSS Corp.; Armonk, NY, USA) software. The normal distribution of continuous variables was assessed using the analytical test procedures (Kolmogorov–Smirnov test and Shapiro–Wilks test). Since numerical values were normally distributed, values were presented as mean, including means ± SDs. Descriptive statistics of the data were presented with n (%). Cross-group comparisons were performed using the chi-square tests and Fisher's exact test for categorical variables. Also, Student t-test was used in the comparison of the numerical data. The Pearson correlation coefficient was employed to assess the linear dependence between numerical variables. Firstly, the effect of independent variables on MGS scores was evaluated using univariate analysis. Predictive value of variables determined as significant in univariate analysis ($P < .05$) on MGS scores was evaluated with multiple linear regression analysis (Enter method). Cronbach's alpha coefficient values for MGS and PAS-overprotection were calculated for this sample. In this sample, the reliability coefficients for the MGS-total and PAS-overprotection dimension were calculated to be 0.855 and 0.896, respectively. In the case group, these reliability coefficients were 0.870 and 0.900 for the MGS-total and PAS-overprotection dimension, respectively. In the comparison group, the reliability coefficients were 0.775 and 0.757 for the MGS-total and PAS-overprotection dimension, respectively. Also, the child's age and gender were included in the model as an adjusting variable. The dataset was evaluated for multicollinearity because the analyses were regression-based. All variance inflation factor (VIF) values were found to be between 1.057-2.055. We tested the mediator effect of PAS-overprotection in the link between DLD diagnosis and MGS scores using SPSS Process Macro v4.2. (Model 4) (Figure 1). Results obtained from the model were interpreted using standardized path analysis. Since the independent variable is a categorical variable, path analysis could be partially standardized. We calculated 95% confidence intervals for the direct and indirect effects using 5000 bias-corrected bootstrap samples.[35]

RESULTS

Comparison of Study Groups in terms of Demographic Variables, Mean Maternal Gatekeeping Scale Scores and Parental Attitude Scale-Overprotection Scores

Thirty-four (75.55%) of the children with DLD and 32 (69.57%) of the TLD were boys ($P=.343$). The mean age by month was 44.8 ± 7.8 in children with DLD and 47.5 ± 9.4 in TLD ($P=.139$). The family structure, preschool education status, maternal/paternal ages, and psychiatric diagnosis in mother did not differ significantly between the case group and the control group ($P=1.000$, $P=.087$, $P=.949$, $P=.719$, $P=.485$ respectively) (Table 1). While sibling number was significantly lower in TLD ($P < .001$), parental education levels were significantly higher in TLD ($P < .001$ for both) (Table 1). Mean PAS-overprotection (34.1 ± 8.4, 24.3 ± 5.9 $P < .001$), modern motherhood (34.6 ± 13.7, 29.8 ± 8.1, $P=.043$), 2-fold responsible motherhood (25.2 ± 8.0, 20.3 ± 6.6, $P=.002$), extreme dependence on motherhood (53.9 ± 9.2, 42.7 ± 8.4, $P < .001$), traditional motherhood (13.6 ± 4.8, 11.5 ± 4.3, $P=.036$), indirect motherhood (14.1 ± 4.5, 11.1 ± 2.4, $P < .001$) and MGS total scores (141.7 ± 24.1, 115.7 ± 20.5, $P < .001$) in children with DLD were significantly higher than those of the TLD (Table 1).

Test of Early Language Development-3 Profile of Patients with LD

The mean TELD-3 standard score and SD were 80.6 ± 13.1 for the receptive language subtest, while the mean TELD-3 standard score and SD were 69.1 ± 8.1 for the expressive language subtest.

Table 1. Comparison of Study Groups in terms of Demographic Variables and Scale Scores

		DLD (45) Mean ± S.D. or n (%)	TLD (46) Mean ± S.D. or n (%)	*P*
Child's gender	Boy	34 (75.55%)	32 (69.57%)	.522
	Girl	11 (24.45%)	14 (30.43%)	
Child's age (month)		44.8± 7.8	47.5 ± 9.4	.139
Sibling number		2.5 ± 1.2	1.2 ± 0.5	**<.001**
Mother age		34.0 ± 5.8	33.9 ± 4.1	.949
Father age		37.1 ± 7.9	36.6 ± 5.0	.719
Mother education	Below HS	20 (46.51%)	1 (2.17%)	**<.001**
	HS and Higher	23 (53.49%)	45 (97.83%)	
Father education	Below HS	18 (41.86 %)	3 (6.52%)	**<.001**
	HS and Higher	25 (58.14%)	43 (93.48%)	
Parents	Together	44 (97.7%)	45 (97.83%)	1.000
	Divorced/Separated	1 (2.3%)	1 (2.17%)	
Child's preschool education	Yes	11 (24.45%)	19 (41.30%)	.087
	No	34 (75.55%)	27 (58.70%)	
Pscyhiatric diagnosis in mother	Yes	5 (11.11%)	3 (6.52%)	.485
	No	40 (88.89%)	43 (93.48%)	
Pscyhiatric diagnosis in father	Yes	0 (0.00%)	0 (0.00%)	
	No	45 (100.00%)	46 (100.00%)	
MGS-Modern motherhood		34.6 ± 13.7	29.8 ± 8.1	**.043**
MGS-Two-fold responsible motherhood		25.2 ± 8.0	20.3 ± 6.6	**.002**
MGS-Extreme dependence on motherhood		53.9 ± 9.2	42.7 ± 8.4	**<.001**
MGS-Traditional motherhood		13.6 ± 4.8	11.5 ± 4.3	**.036**
MGS-Indirect motherhood		14.1 ± 4.5	11.1 ± 2.4	**<.001**
MGS-Total Score		141.7 ± 24.1	115.7 ± 20.5	**<.001**
PAS-overprotection		34.1 ± 8.4	24.3 ± 5.9	**<.001**

DLD, developmental learning disorder; HS, High School; MGS, Maternal Gatekeeping Scale, n: number; n (%): number of cases (percentage); PAS, parent attitude scale; TLD, typical language development.

Univariate Analysis of the Factors Affecting Maternal Gatekeeping Scale Scores

MGS score showed significant differences in terms of mother's education level ($P < .001$), father's education level ($P = .002$), family income level ($P = .029$) and child's independency status in sleeping ($P = .031$) (Table 2).

Numerical variables associated with MGS scores were investigated with Pearson correlation coefficient. Sibling number (r = .293$r = .293$, $P = .005$) and PAS-overprotection scores ($r = .552$, $P < .001$) were found to be positively correlated with MGS scores. Child's ($r = -0.103$, $P = .332$), father's ($r = -0.149$, $P = .163$), and mother's ages ($r = -0.108$, $P = .316$) did not show any significant associations (Table 3).

Multiple Linear Regression Analysis of the Factors Affecting Maternal Gatekeeping Scale Scores

Considering the results of univariate analysis and the relevant literature, we generated a linear regression model and included the variables significant at the level of $P < 0.05$ in the model. It is known that VIF detects multicollinearity in regression analysis. Consequently, we determined that the VIF values were below 3 for all the variables included in the model; therefore, the multicollinearity assumption was not violated.[36] The statistical significance value for the regression model was obtained as $P < .001$. According to the multiple regression analysis results, we found factors associated with MGS scores to the presence of DLD diagnosis ($P = .029$) and PAS-overprotection ($P = .001$) and family income level ($P = .045$) (Table 4).

The Mediator Role of PAS-overprotection on the effect of DLD diagnosis on Maternal Gatekeeping Scale Scores

The path analysis was performed to investigate the mediator role of PAS-overprotection scores on the relation between DLD diagnosis and MGS scores. The total effect of X on Y was significant ($P < .001$), while the direct effect of X on Y was also significant ($p = .007$). As a result of analysis, it was obtained that presence of DLD diagnosis significantly predicted PAS-overprotection (path a) ($\beta = 1.123$, $P < .001$, 95% CI [0.778, 1.469]). Also, PAS-overprotection was found as significantly predicting MGS (path b) ($\beta = 0.391$, $P < .001$,

Table 2. The Results of the Univariate Analysis of Categorical Parameters Affecting Maternal Gatekeeping Scale Scores

Variables		n	Mean MGS score ± SD	*P*
Child's gender	Female	25	130.1 ± 23.8	.732
	Male	66	128.0 ± 260 ± 26.6	
Nuclear family	Yes	81	128.6 ± 24.7	.644
	No	8	133.0 ± 320 ± 32.0	
Child's p reschool education	Yes	30	124.0 ± 26.0	.235
	No	61	130.8 ± 258 ± 25.5	
Type of birth	Vaginal	20	127.0 ± 31.3	.746
	C/S	69	139.1 ± 241 ± 24.3	
Mother's education	Below HS	21	142.08 ± 14.3	**<.001**
	HS and Higher	68	124.7 ± 267 ± 26.4	
Father's education	Below HS	21	141.0±16.7	**.002**
	HS and Higher	68	125.3 ± 263 ± 26.3	
Family income	Below 8.000TL	39	123.3 ± 28.3	**.029**
	8.000 and Higher	50	135.3 ± 203 ± 20.7	
Mother's psychiatric Diagnosis	Yes	8	142.5 ± 24.9	.111
	No	83	127.2 ± 252 ± 25.6	
Child's independency in feeding	Yes	35	125.9 ± 23.5	.624
	No	56	129.6 ± 276 ± 27.2	
Child's independency in toilet cleaning	Yes	7	129.8 ± 30.8	.331
	No	54	121.1 ± 201 ± 20.8	
Child's independency in sleeping	Yes	33	120.9 ± 25.6	**.031**
	No	58	132.9 ± 259 ± 25.0	

C/S, cesarean section; MGS, Maternal Gatekeeping Scale; n, frequency.

Table 3. The Results of the Correlational Analysis of Numeric Parameters Affecting Maternal Gatekeeping Scale Scores

		Child's Age (month)	Sibling Number	PAS	Father Age	Mother Age
MGS	*r*	−0.103	**0.293**	**0.552**	−0.149	−0.108
	P	.332	.005	<.001	.163	.316

Pearson correlation coefficient.
MGS: Maternal Gatekeeping Scale; PAS: Parent Attitude Scale.

95% CI [0.186, 0.597]). Before the PAS-overprotective included in the model, DLD diagnosis was obtained as predicting MGS significantly (path c) (β =1.005, $P < .001$, 95% CI [0.644, 1.367]). However, DLD remains as a predictive factor of MGS with lower significance and path coefficient (path c) (β =0.565, $P=.007$, 95% CI [0.157, 0.974]) after including PAS-overprotective in the model. As a result, PAS-overprotective obtained to have a partial mediating role in the relationship between DLD diagnosis and MGS scores. Direct and indirect effect coefficients and statistical significance values were stated in the Figure 2.

DISCUSSION

In this study, DLD diagnosis was found to be associated with an increase in maternal gatekeeping. Also, overprotective attitudes were found to have a mediator role in between this relationship. The results demonstrated that maternal gatekeeping and over-protectiveness were higher in the DLD group compared to the control group. These findings are consistent with previous literature highlighting that mothers are overloaded in the management of DLD.[4] The symptoms of DLD are typically more evident at an early age and can persist throughout the lifespan with varying manifestations. Although DLD primarily affects language abilities, it can also impair the functionality of the child.[27] Maternal coparenting attitudes can be influenced by factors such as maternal expectations.[37] Also, large-scale studies have reported a lower quality of life among children with DLD, along with co-occurring social and emotional problems that impact the outcome. Consequently, it can be inferred that children with DLD require more support in their social and communicative development.[38] Additionally, limitations, functional impairments, and the need for support in children with DLD may affect the degree of dependence on motherhood and maternal parenting behavior. Motherhood develops within a relationship characterized by dependency and can become an integral part of a woman's identity. The child's needs, abilities, and experiences can also reciprocally shape the development of motherhood and its role in a woman's identity.[39] Therefore, it can be thought that limitations in the functioning of the child with DLD might increase the dependence on motherhood. However, other factors may also contribute to the characteristics of motherhood, such as the woman's autonomy as an adult,[39] woman's personal history,[40] paternal factors[41] or socio/cultural factors.[42] It is important to note that as a limitation, this study cannot establish a direct causal relationship between DLD and maternal gatekeeping, as data prior to the onset of DLD signs and symptoms in these participants were not available. Nevertheless, it may be recommended to evaluate maternal gatekeeping and excessive dependence on motherhood in children with DLD, considering the potential impact on parenting dynamics and support strategies.

Our study also demonstrated that maternal overprotectiveness is significantly associated with DLD. Children with DLD show drastic impairment in social-communication skills.[27] In addition, they may face challenges in engaging in independent activities[43] and may

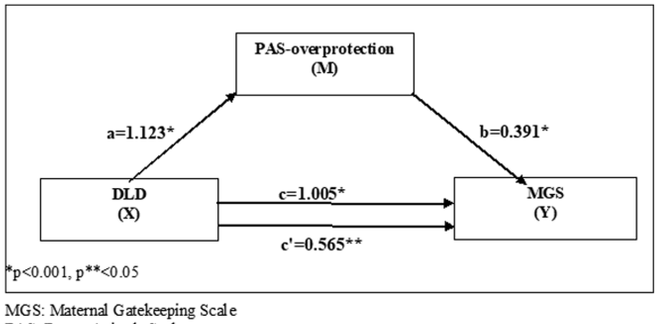
Table 4. The Results of the Multiple Regression Analysis for Factors Affecting Maternal Gatekeeping Scale Scores

Variables	MGS				
	β	95%CI		*P*	VIF
		Lower Bound	Upper Bound		
Constant	79.323	46.867	111.779	**<.001**	
PAS-overprotection	1.158	0.503	1.813	**.001**	1.618
DLD diagnosis (Yes = 1)	14.195	1.477	26.912	**.029**	2.015
Gender (Male = 1)	3.241	−7.074	13.556	.533	1.057
Age	0.025	−0.519	0.570	.926	1.128
Sibling number	0.131	−5.123	5.385	.961	1.700
Mother education (Below HS = 1)	−4.845	−19.967	10.277	.525	2.055
Father Education ((Below HS = 1)	3.657	−9.459	16.774	.580	1.546
Income level (Lower than 8000T L= 1)	9.643	0.230	19.055	**.045**	1.087
Sleep independency (No = 1)	1.358	0.793	11.611	.793	1.211

Dependent variable: MGS. Below HS, education level below high school; CI, confidence interval; DLD, developmental language disorder; MGS, maternal gatekeeping scale; PAS, parent attitude scale.
Durbin-Watson = 1.608; adjusted *R*-squared = .331; model effect size $F = 5.778$; $P < .001$.

also may have more difficulty transitioning from being taken care of to developing independence.[28] Previous research has reported that parental overprotection and child independence are negatively associated across different age groups.[44-46] Therefore, it can be suggested that our finding showing higher levels of over-protectiveness in children with DLD is reasonable. Overprotection was also found to be associated with maternal gatekeeping. Although there was a significant association between DLD diagnosis and an increase in maternal gatekeeping, overprotection had a partial mediating effect on MGS. While overprotection refers to a type of behavior,[18] gatekeeping is a more comprehensive term referring to both style of belief and behavior. Parental gatekeeping can also be considered as a style of identification with the parental identity.[47] Therefore, based on our result showing the mediator role of overprotectiveness, we recommend that future studies investigate whether overprotective motherhood is a predisposing factor for maternal gatekeeping in DLD.

Although our study groups shared some similarities in terms of family structure, preschool education status, and medical history, parental education level and sibling number were found to be significantly different across groups. Having a higher number of children was identified as a risk factor for DLD[48] and may potentially limit access to language-supportive activities due to socio-economic reasons. Lower parental education levels in children with language pathologies were reported before also[49] and lower maternal education was described as a risk factor for developmental language disorder.[48,50] However, it has been reported that parenting practices are affected by the parental education level.[51] Therefore, although our result is consistent with the literature, this result can be considered a limitation of our sample.



MGS: Maternal Gatekeeping Scale
PAS: Parent Attitude Scale
DLD: Developmental Language Disorder

Figure 2. Statistical diagram of the mediation model and analysis results.

Irrespective of the presence of other underlying psychopathologies, it is widely recognized that the father's involvement in child-rearing is highly beneficial and positively impacts the child's development.[11,12] In addition, the paternal factors are of great importance in language development.[13-16] Therefore, findings of this current study further highlight the need to encourage mothers to share responsibility in the care of children with DLD. Yet, it is also essential to note that these results may not be specific to DLD, as parenting roles tend to evolve with time and can show cultural differences.[12,52] Therefore, further investigation of this hypothesis in diverse cultural contexts is required. Nevertheless, based on the results of this study and the previous reports,[17] it is recommended to assess parenting behaviors in the context of DLD.

This study contributes to the literature by presenting novel data in an area that has not been thoroughly investigated before. In the sample, all cases were evaluated by 2 separate child and adolescent psychiatrists in terms of the diagnosis of DLD. In order to isolate DLD cases, cases with hearing impairment and general developmental delay were excluded. Hearing impairments and general developmental delays were excluded after detailed

audiological examinations and developmental tests. There are also several limitations to be acknowledged in our study. Firstly, although our sample size was adequate according to the power analysis, the results of this study cannot be generalized to all clinical populations as it was a single-center study. Secondly, the evaluations in this study were solely based on the assessments of mothers. Further research should involve both parents to provide a more comprehensive understanding of the effect of parental involvement. Thirdly, due to the predominant inclusion of boys in the sample, the parameters could not be investigated in terms of gender differences. Hence, it would be valuable to investigate and explore more about the gender-based parental attitude differences in future studies. Fourthly, there are some factors that may affect the parenting style such as insecure attachment, child temperament, and maternal psychopathology. Our evaluations regarding these factors were insufficient. So, our model has a considerable limitation. However, this current study may provide insight for further researches investigating parenting attitudes and parental involvement in DLD. Finally, same-sex parents could not be included in this study due to legal restrictions on adoption for same-sex couples in the country where the research was conducted.

Present study reveals that maternal gatekeeping is associated with DLD and overprotection. These findings underscore that maternal overload may be high through maternal gatekeeping. Therefore, it would be useful to evaluate motherhood practices in children with DLD in order to balance the parental burden and support language development. Additionally, approaches that include mothers can be recommended to develop independen cy-supporting attitudes in the care for children with DLD. Notwithstanding, it is critical to emphasize that further research conducted with larger and more multicentric clinical populations is necessary to validate and generalize these results.

Ethics Committee Approval: This study was approved by the Istanbul University-Cerrahpaşa, Cerrahpaşa Medical School Ethics Committee (Approval No: 90672, Date: May 5, 2021).

Informed Consent: Written informed consent was obtained from the parents who agreed to take part in the study.

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