

## **The Effects of Mothers' Age, Educational Level, Occupation and Children's Birth Order on Iranian Preschoolers' Communicative Performance**

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**Abstract.** The researchers aim was to find out the potential effects of some maternal factors such as age, educational level, occupation as well as children's birth order on the communicative performance of preschoolers in Iran. This study was conducted with 31 preschoolers selected from Bahar Language Institute in Shiraz, Iran. The required data about mothers and children were gathered through a questionnaire developed by the researchers and an interview done by two raters. Following the process of data collection, independent samples t-test was employed, the results of which indicated that there was a significant difference between the pronunciation of children based on their mothers' education level (sig.=.03,  $p<.05$ ). It was also found out that there was a significant difference (sig.=.019,  $p<.05$ ) between the total communicative performances of working mothers' children ( $M=85.94$ ) and that of children whose mothers were unemployed housewives ( $M=80.82$ ). However, the researchers found no significant difference between communicative performance of these two groups whose mothers belonged to different age groups, i.e. below 35 and above 35. Also,

the results demonstrated a significant difference (sig.=.009,  $p<.05$ ) in the pronunciation of first children compared to that of second kids.

**Keywords:** Age, educational level, occupation, birth order, communicative performance, first language acquisition

## 1. Introduction

Although many people are of the belief that first language acquisition is a simple instinctive phenomenon, it is one of the most prominent complexities over which human beings make attempts to gain mastery (Mac Whinney, 2002). That is why so far many scholars have conducted strands of research regarding first language acquisition and crucial factors that have significant impacts on this process so as to explore some of these complexities and wipe out the confusion of facts that surrounds us.

Owing to the fact that mothers are children's first teachers and that family serves as children's first language acquisition place, mothers' traits such as their age, educational level and job are of great importance in children's first language acquisition. Besides, it is crystal clear that children's' birth order has crucial impacts on the child-mother relationship and the amount of language input children receive. However, in spite of the fact that body of research conducted so far indicates that maternal and paternal educational level, financial position of the family as well as children's birth order make contributions to child language development, there is still a dearth of information on the way mothers' age, educational level, and occupation influence child's language development in general and communicative performance in particular. Furthermore, there is very little literature on the possible impacts of child birth order on the communication of preschoolers or kindergarten children in Iran. In consequence, this study directly addresses this gap in the research by investigating the likely effects of maternal education level, age and occupation as well as child birth order on the development of communicative performance of preschoolers or kindergarten children.

## 2. Research Questions

This study aimed at investigating the effects of mothers' traits such as age, education, and occupations as well as impacts of child birth order on child's L1 communicative performance. More specifically, the study seeks to find answers to these questions:

1. Does mothers' education level regardless of their age contribute to Iranian preschoolers' communicative performance development?
2. Does mothers' occupation contribute to Iranian preschoolers' communicative performance development?
3. Does mothers' age influence Iranian preschoolers' communicative performance development?
4. Does Iranian preschoolers' birth order influence their communicative performance development?

## 3. Literature Review

So far, the role of family and parents in children's first language acquisition has been taken for granted by scholars and linguists. That is why the last three decades have witnessed a rise in the number of studies that have focused on parental impacts and interaction with their children language development (Pancsofar & Vernon-Feagans, 2010).

According to Hoff (2009), Mowder (1997), and Shonkoff and Philips (2000), children's rapid language development in general and the acquisition of communicative skills in particular occur within the first years of children's life. Also, researchers such as Olson (1986), whose study focused on the impacts of some maternal features on children's first language acquisition skills in general and their communicative competence and reading and listening comprehension skills in particular, stated that occurrence of language development is especially influenced by mothers who gradually provide children with the most input as they grow up.

Hoff-Ginsberg (1991), and Lewis and Wilson (1972) were some other researchers claiming that mothers of different social classes have different effects on children's language acquisition. Besides, Kagan and Tulkin (1972) realized that middle class mothers were inclined to have more meaningful verbal communication with their children whereas low-

income mothers were claimed to have less verbal interactions with their children (Hoff- Ginsberg, 1991).

Although many studies centered on the crucial role of mothers as the primary caregiver in child language development and communication, it was claimed by Coleman (1988) and Amato (1998) that fathers' education, traits and knowledge might lead to children's language development and improve their competency in the acquisition of communication and language skills. Also, it was discovered by Cabrera, Tamis-LeMonda, Bradley, Hofferth, and Lamb (2007) that fathers' education has positive impacts on children's language development at 24 and 36 months of age.

Furthermore, it was asserted that quality and quantity of interactions among fathers and children may be influenced by paternal education (Ahmeduzzaman & Roopnarine, 1992; Coley & Chase-Lansdale, 1999; Gavin, Black, Minor, Abel, Papas, & Bentley, 2002; Yogman, Kindlonher, & Earls, 1995) as well as maternal education (Hoff, 2006) even within low-income families and societies.

In addition, according to the lines of research conducted by Hart and Risley (1995), Hoff (2006), Hoff, Laursen and Tardif (2002), and Hoff-Gingsberg (1998) , children's advanced language development is linked to maternal education level inasmuch as highly-educated mothers are inclined to have more and better interaction with their children compared to less educated ones.

Also, in a study, Evans (2004) illustrated that there is an association between the level of family income and children's language development. In other words, in families with low income, children suffer from language development delays.

In 2004, Bornstein, Leach & Haynes and in 1998, Hoff- Ginsberg took the role of child birth order into account and stated that first-born children outperformed later born children regarding language development. They associated child birth order with their early vocabulary competence.

Moreover, some researchers such as Laible (2004), Lewis (1999) and Vernon-Feagnas, Pancsofar, Willoughby, Odom, Quade, and Cox (2008)

investigated the role of child temperament in their language development. Based on Laible's (2004) research findings, mothers of preschoolers provide their children with more elaborations during language tasks particularly when they receive more negative reactivity from their children.

## **4. Method**

### **4.1. Participants**

This study was conducted with 31 preschoolers studying English at Bahar, one of the language learning institutes in Shiraz, Iran. Subjects' age ranged from five to six years and they were both male and female students. They were asked to describe pictures shown to them and state what they thought about them. They were also requested to answer some general questions in order that raters could evaluate their communicative performance. Furthermore, in order to make a friendly atmosphere, children were given some chocolates and their voice was recorded without taking notes by the researchers and their assistant during the interview to make them feel comfortable and relaxed to show their actual communicative performance.

### **4.2. Instruments**

In order to conduct the present study, the researchers used a questionnaire and interviews done with children. The questionnaire made by the researchers consisted of four items. Children's mothers were given the questionnaire in order to elicit information about their age, job, education level and the birth order of their child under study. Furthermore, to evaluate children's communicative performance, they were interviewed. In order to have a better assessment of children's communicative performance, interviews were done by two raters. To do so, they demonstrated some pictures to children and asked them to describe whatever they saw or what they thought about pictures as well as asking them to answer some general questions. It is worthy of mentioning that the inter-rater reliability of the interviews was calculated, the results of which indicated that there was a significant correlation (.94) between the raters' assessment. Thus, it was concluded that the assessments enjoyed high inter-rater reliability.

### 4.3. Data collection

Children's mothers were required to fill in the questionnaire about their age, education level, and employment, as well as their children's birth order. Meanwhile, in order to minimize the effect of children's potential stress and maximize their concentration, first a friendly atmosphere was made through giving some chocolates to children at the beginning of the interview and recording their voice without taking notes by the researchers and their assistant during the interview to make them feel comfortable and relaxed to show their actual communicative performance. Then, they were asked to answer the questions in a silent class and there was no time limit. Children's communicative performance was evaluated based on their fluency and coherence, accuracy and grammatical range, lexical resources, pronunciation and discursal and pragmatic features. As for scoring the children's communicative performance, each of these subcategories of verbal communicative performance was evaluated and scored from zero to twenty.

### 4.4. Data analysis

As the main step in data analysis, independent-samples *t*-tests were run to determine the difference in children's communicative performance due to the impact of their mothers' age, education level or employment.

## 5. Results and Discussion

An independent samples *t*-test was performed to determine the differences between the communicative performances of children whose mothers' education level was below diploma and those whose mothers were above diploma. The results presented in tables 1 and 2 reports that statistically there is a significant difference between the pronunciation of children whose mothers' education level was above diploma and that of children who had below-diploma mothers (sig.=.03,  $p < .05$ ). Concerning the mean scores, tables 1 and 2 illustrate that the children whose mothers education degrees were above diploma ( $M=17.42$ ) had better pronunciation performance in comparison with kids whose mothers were below diploma ( $M=16.44$ ).

**Table 1.** Group Statistics

	Mother's education	N	Mean	Std. Deviation	Std. Error Mean
Fluency and Coherence	(Below) /Diploma	18	16.6389	1.08201	.25503
	Above Diploma	13	16.8846	1.64765	.45698
Accuracy and Grammatical Range	(Below) /Diploma	18	16.6389	1.23438	.29095
	Above Diploma	13	17.0000	2.15058	.59646
Lexical Resources	(Below) /Diploma	18	16.6389	1.09552	.25822
	Above Diploma	13	16.8846	1.59627	.44273
Pronunciation	(Below) /Diploma	18	16.4444	1.16175	.27383
	Above Diploma	13	17.4231	1.33613	.37058
Discoursal and Pragmatic Features	(Below) /Diploma	18	16.2222	1.08766	.25636
	Above Diploma	13	16.8846	1.29347	.35875
Total Score	(Below) /Diploma	18	82.5833	5.14281	1.21217
	Above Diploma	13	85.0769	7.36220	2.04191

**Table 2.** Independent-samples t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Fluency and Coherence	Equal variances assumed	.295	.591	-.502	29	.620	-.24573	.48963	-1.24714	.75568
	Equal variances not assumed			-.470	19.316	.644	-.24573	.52332	-1.33984	.84839
Accuracy and Grammatical Range	Equal variances assumed	2.088	.159	-.592	29	.558	-.36111	.60981	-1.60831	.88609
	Equal variances not assumed			-.544	17.683	.593	-.36111	.66364	-1.75716	1.03494
Lexical Resources	Equal variances assumed	.398	.533	-.509	29	.614	-.24573	.48258	-1.23272	.74127
	Equal variances not assumed			-.479	19.925	.637	-.24573	.51252	-1.31509	.82364

Pronunciation	Equal variances assumed	.003	.954	-2.174	29	.038	-.97863	.45020	-1.89940	-.05787
	Equal variances not assumed			-2.124	23.695	.044	-.97863	.46077	-1.93026	-.02700
Discoursal and Pragmatic Features	Equal variances assumed	.106	.747	-1.546	29	.133	-.66239	.42847	-1.53872	.21393
	Equal variances not assumed			-1.502	23.128	.147	-.66239	.44093	-1.57425	.24946
Total Score	Equal variances assumed	.772	.387	-1.112	29	.275	-2.49359	2.24171	-7.07840	2.09123
	Equal variances not assumed			-1.050	20.179	.306	-2.49359	2.37460	-7.44411	2.45693

According to the results of independent samples *t*-tests in tables 3 and 4, there was also a significant difference (sig.=.019,  $p < .05$ ) between the total communicative performances of working mothers' children ( $M=85.94$ ) and that of children whose mothers were unemployed housewives ( $M=80.82$ ). Moreover, these two groups were observed to be significantly different regarding these variables: the fluency and coherence (sig.=.031), accuracy and grammatical range (sig.=.006), and lexical resources (sig.=.18). Based on the findings demonstrated in tables 3 and 4, the children whose mothers were at work performed better in terms of fluency and coherence ( $M=17.23$ ), accuracy and grammatical range ( $M=17.50$ ), and lexical resources ( $M=17.23$ ).

**Table 3.** Group statistics

	Mother's job	N	Mean	Std. Deviation	Std. Error Mean
Fluency and Coherence	on the Job	17	17.2353	.83137	.20164
	out of a Job	14	16.1429	1.58634	.42397
Accuracy and Grammatical Range	on the Job	17	17.5000	1.13192	.27453
	out of a Job	14	15.9286	1.81720	.48567
Lexical Resources	on the Job	17	17.2353	1.03256	.25043
	out of a Job	14	16.1429	1.39268	.37221



	Mother's job	N	Mean	Std. Deviation	Std. Error Mean
Pronunciation	on the Job	17	17.1176	1.26897	.30777
	out of a Job	14	16.5357	1.33682	.35728
Discoursal and Pragmatic Features	on the Job	17	16.8529	1.07187	.25997
	out of a Job	14	16.0714	1.25357	.33503
Total Score	on the Job	17	85.9412	4.76603	1.15593
	out of a Job	14	80.8214	6.69273	1.78871

**Table 4.** Independent-samples t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Fluency and Coherence	Equal variances assumed	4.309	.047	2.464	29	.020	1.09244	.44340	.18558	1.99929
	Equal variances not assumed			2.327	18.766	.031	1.09244	.46947	.10899	2.07589
Accuracy and Grammatical Range	Equal variances assumed	3.025	.093	2.944	29	.006	1.57143	.53375	.47979	2.66306
	Equal variances not assumed			2.817	20.901	.010	1.57143	.55789	.41090	2.73195
Lexical Resources	Equal variances assumed	1.837	.186	2.507	29	.018	1.09244	.43574	.20125	1.98362
	Equal variances not assumed			2.435	23.518	.023	1.09244	.44862	.16553	2.01934
Pronunciation	Equal variances assumed	.269	.608	1.240	29	.225	.58193	.46911	-.37751	1.54138
	Equal variances not assumed			1.234	27.257	.228	.58193	.47156	-.38521	1.54907



									Lower	Upper
Fluency and Coherence	Equal variances assumed	.023	.882	-.522	29	.606	-.25877	.49586	-1.27292	.75537
	Equal variances not assumed			-.497	19.840	.625	-.25877	.52113	-1.34639	.82885
Accuracy and Grammatical Range	Equal variances assumed	.082	.777	-.215	29	.831	-.13377	.62101	-1.40387	1.13633
	Equal variances not assumed			-.212	22.389	.834	-.13377	.63041	-1.43984	1.17230
Lexical Resources	Equal variances assumed	.019	.891	-.250	29	.804	-.12281	.49054	-1.12608	.88047
	Equal variances not assumed			-.244	21.602	.809	-.12281	.50318	-1.16745	.92183
Pronunciation	Equal variances assumed	.424	.520	.344	29	.733	.16886	.49084	-.83502	1.17274
	Equal variances not assumed			.354	25.616	.727	.16886	.47757	-.81352	1.15124
Discoursal and Pragmatic Features	Equal variances assumed	.564	.459	-.453	29	.654	-.20395	.45001	-1.12433	.71644
	Equal variances not assumed			-.469	26.053	.643	-.20395	.43519	-1.09840	.69051
Total Score	Equal variances assumed	.453	.506	-.238	29	.814	-.55044	2.31671	-5.28863	4.18776
	Equal variances not assumed			-.241	24.621	.812	-.55044	2.28436	-5.25885	4.15797

As for the last research question concerning the effects of children's birth order on their communicative performance development, analyses of results demonstrated a significant difference ( $\text{sig.} = .009$ ) in the pronunciation of first children compared to that of second kids. Tables 7

and 8 clearly indicate that first children ( $M= 17.46$ ) pronounced the words much more appropriately than second children ( $M=16.28$ ).

**Table 7.** Group statistics

	Child	N	Mean	Std. Deviation	Std. Error Mean
Fluency and Coherence	First	15	16.9333	1.57963	.40786
	Second	16	16.5625	1.06262	.26566
Accuracy and Grammatical Range	First	15	17.1333	1.99523	.51517
	Second	16	16.4688	1.24457	.31114
Lexical Resources	First	15	16.9667	1.50555	.38873
	Second	16	16.5313	1.10255	.27564
Pronunciation	First	15	17.4667	1.04312	.26933
	Second	16	16.2813	1.30344	.32586
Discoursal and Pragmatic Features	First	15	16.7667	1.33452	.34457
	Second	16	16.2500	1.04881	.26220
Total Score	First	15	85.2667	6.68919	1.72714
	Second	16	82.0938	5.43206	1.35802

**Table 8.** Independent-samples t-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Fluency and Coherence	Equal variances assumed	.487	.491	.772	29	.447	.37083	.48066	-.61223	1.35389
	Equal variances not assumed			.762	24.314	.453	.37083	.48675	-.63308	1.37474
Accuracy and Grammatical Range	Equal variances assumed	1.031	.318	1.121	29	.272	.66458	.59306	-.54837	1.87753
	Equal variances not assumed			1.104	23.196	.281	.66458	.60184	-.57983	1.90899
Lexical Resources	Equal variances	.133	.718	.923	29	.364	.43542	.47176	-.52944	1.40027

	assumed									
	Equal variances not assumed			.914	25.581	.369	.43542	.47654	-.54490	1.41573
Pronunciation	Equal variances assumed	1.322	.260	2.784	29	.009	1.18542	.42586	.31443	2.05640
	Equal variances not assumed			2.804	28.329	.009	1.18542	.42276	.31989	2.05094
Discoursal and Pragmatic Features	Equal variances assumed	.335	.567	1.203	29	.239	.51667	.42959	-.36194	1.39527
	Equal variances not assumed			1.193	26.587	.243	.51667	.43299	-.37240	1.40573
Total Score	Equal variances assumed	.022	.883	1.454	29	.157	3.17292	2.18210	-1.28997	7.63580
	Equal variances not assumed			1.444	27.022	.160	3.17292	2.19709	-1.33498	7.68081

## 6. Discussion and Conclusion

The results of the present study demonstrated that there was a difference between the pronunciation of children whose mothers' education level was above diploma and that of children whose mothers were below diploma, and that the first group had much better pronunciation compared to the second group. As a consequence, the results of the study, to some extent, support the findings of the study done by Hart & Risely (1995), Hoff (2006), Hoff, Laursen and Tardif (2002), and Hoff-Gingsberg (1998) who concluded that children's advanced language development is linked to mothers' education level owing to highly-educated mothers' inclination to have more and better interaction with their children in comparison with less educated mothers. Moreover, as expected by the researchers of this study, the more highly-educated mothers are, the wider range of vocabulary and the better pronunciation they have which surely influences children's

communicative performance in general and their pronunciation in particular.

Further, a significant difference between the total communicative performance as well as fluency and coherence, accuracy and grammatical range and lexical resources of working mothers' children and those of unemployed mothers was found. Simply put, working mothers' children outperformed non-working mothers' kids in this regard. In other words, it was found that mothers' employment had impacts on the total children's communicative performance, and their fluency, accuracy and vocabulary resources. The results of the study seems quite reasonable inasmuch as the first group, i.e., working mothers' kids learned communication and sociability from their mothers whose jobs required them to have more social communication with their clients, colleagues, etc. compared to unemployed mothers. Also, employed mothers were more likely to have tendency to bring up sociable kids through paying more attention to their fluency, accuracy and other language skills.

According to the results of the study, mothers' age had no significant effects on children's communicative performance. In other words, there was no significant difference in the communicative performance of preschoolers whose mothers were below 35 and those with above 35-year-old mothers. In this regard, it can be argued that in spite of the role of mothers' age in their motivation to boost up their kids' communicative performance, other environmental, social and individual factors have more crucial and dominant impacts on this process.

Besides, the analysis of results revealed that children's birth order influenced their pronunciation skills and that first-born children had better pronunciation skills than second kids which seems quite logical because first children are the center of their mothers' attention and their mothers are inclined to pay more attention to the details of their kids' language learning process and especially their pronunciation. In other words, first children's mothers have more tendencies to provide their children with language input in the first place and correct their children's output and give them feedback in the second place in comparison with mothers of later-born children. In addition, the results of the current research to some extent support the results of research

conducted by Bornstein, Leach and Haynes (2004) as well as those obtained by Hoff-Ginsberg (1998) who made a conclusion that first-born children outperformed later-born children regarding language skill development process.

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