



Original Article

The Study of the Development of Dependent Possessive Pronouns in 2.5-4 Year-Old Typically Normal Persian-Speaking Children

Shoeleh Sharifypour¹, Talieh Zarifian^{1*}, Ayoub Sheikhi², Sharifeh Sharifypour³

¹Department of Speech Therapy, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

²Department of Statistics, Faculty of Mathematics and Computer, University of Shahid Bahonar, Kerman, Iran

³Department of Statistics, Payam Noor University, Tehran, Iran

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ABSTRACT

Background: Pronoun error is one of the most common errors in many speech and language disorders. Therefore, knowing about the development procedure of dependent possessive pronouns (as a subgroup of pronouns), leads to build an accurate profile for evaluation and treatment of many disorders. The goal of the present study was to examine the development of dependent possessive pronouns in 2.5-4 years old Persian-speaking children.

Methods: In this cross sectional descriptive-analytic study, 177 typically normal Persian speaking children in age range of 2.5-4 years old (94 girls and 83 boys) who were selected by stratified sampling method from 10 kindergartens of Kerman were examined. There were 3 age groups (2.5-3, 3-3.5 and 3.5-4 years old). The instrument used in this study was a researcher-made task consistent of 18 questions about some parts of body to examine the development of dependent possessive pronouns. For descriptive report central tendencies and indices of dispersion were used and for statistics relations Spearman's correlation test, Mann-Whitney test, Kruskal-Wallis test and Cochran's test were used.

Results: The order of correct use of dependent possessive pronouns was from singular to plural and the order of person was 3rd person, 1st person and then 2nd person. There was a correlation between age and correct use of dependent possessive pronouns ($P < 0.05$). The performance of girls and boys were similar ($P > 0.05$), but children's performance in 3 age groups were different ($P < 0.05$) and correct use of 6 types of dependent possessive pronouns were significantly different ($P < 0.05$).

Conclusion: The correct use of dependent possessive pronouns increased with age, and by the age of 4, the children mastered in more than 90% of dependent possessive pronouns.

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Introduction

In English, at Mean Length of Utterance (MLU) morphemes of 2 to 2.5, which usually begins around the second year, a limited number of morphemes begin to appear gradually [1]. At the age of 3 most children

produce complex and detailed noun phrases by adding many components. They mostly use articles, possessive pronouns and adjectives [1,2].

Pronoun is a term used in the grammatical classification of words, referring to the closed set of items which can be used to substitute for a single noun or a noun phrase. There are many types of pronouns such as personal, demonstrative, reflexive and indefinite [3].

Pronouns change according to the context. This means

*Corresponding author: Talieh Zarifian, Assistant professor, Department of Speech Therapy, University of Social Welfare and Rehabilitation Sciences, Kodakyar Ave, Daneshjou Blvd, Evin, Tehran, Iran. Tel: +98-21-22180043
E-mail: t.zarifian@uswr.ac.ir

that they change based on the number, gender, speaker, and their grammatical roles in a sentence [4,5]. A linguistic complexity has a role in the acquisition of pronouns and it is defined by three principles of linguistic contrast, namely the proximal-non proximal, singular-nonsingular, and speaker-non speaker contrasts. Therefore, the first pronoun should be proximal, singular, and speaker (1st person) [6]. In Persian, pronouns are gender-neutral and according to the syntactic and morphological rules they are used as subject, object or possessive. They provide information about the person and number. They are divided into two groups: dependent (enclitic) and independent [7,8].

Languages do not have the same acquisition patterns and this can make differences in language acquisition [9].

English-speaking children begin to use pronouns between 19-24 months, and possessive pronouns morphemes are used between 2-3 years [10]. Most children have some control over all the main classes of pronouns by age of 5, but some pronouns still remain to emerge. 1st person singular pronoun is the first to be used and 3rd person pronouns follow (inanimate, animate, male, and female, respectively) and then plural pronouns emerge [11,12]. The 1st person singular possessive pronoun emerges first in this class [11,13]. Subject pronouns emerge before objects [11,14], and possessive pronouns emerge after them [14]. The possessive pronouns are used between 18 to 24 months of age and are consolidated over the next year [13].

In different countries and languages, numerous studies have examined the development of pronouns in normal children [1,6,10-18]. In French, 1st and 2nd person pronouns are acquired before 3rd person pronouns [18]. In Spanish, object pronouns emerge before subjects [15]. In Chinese, 1st and 2nd person pronouns emerge before 3rd person pronouns [16].

A longitudinal study examined the speech of 2 children between 12 to 36 months, and found that dependent possessive pronouns emerged in the following order: 3rd person singular /-eʃ/, 1st person singular /-æm/, 2nd person singular /-et/, and 3rd person plural /-eʃan/, until 30 months of age; and 1st person plural /-eman / emerged between 30-36 months. When MLU was more than 3 morphemes, more morphemes were found in speech and some plural pronouns gradually emerged, but some pronouns like 2nd person plural /-etan / were not used frequently until 36 months of age. The most use of pronouns was between 30-36 months and children used singular pronouns before plural pronouns [8,19]. Another longitudinal study reported that the child used 1st person possessive pronoun in two utterances “dæstæm kæsife” (my hand is dirty) and “shælvare mæne” (it’s my trousers) at the age of 23 months [20]. A speech study of two children from infancy to 60 months of age demonstrated that in the two-word stage, possessive forms were present, and around the age of two until the middle months of the age of five, structures, components and grammatical words gradually entered to children’s speech [21]. And between 24-30 months of age, a child used the dependent possessive pronouns in some utterances such as “babam” (my dad)

and “babat” (your dad) [22].

So far, the longitudinal studies conducted in Iran have focused on a general examination of pronouns development in a few children, or have reported pronouns development as a lateral finding in speech and language studies [8,19-22]. Since pronoun errors are one of the most common errors in some speech and language disorders like hearing loss and SLI [23-27], it is necessary to learn about the patterns of the pronoun acquisition in order to have accurate expectations of normal learning patterns and as there is no Persian instrument for assessing this skill exclusively, the goal of the present study was to examine the development of dependent possessive pronouns in 2.5-4 year-old typically Persian-speaking children in Kerman.

Methods

In this descriptive-analytical cross sectional study, 177 normal Persian-speaking children at the age of 25-4 years were examined. Ninety four girls and 83 boys were in 3 age groups (2.5-3, 3-3.5 and 3.5-4 years old) were selected by a simple randomized sampling method from 10 kindergartens of Kerman. Subjects included in this study were monolingual, aged between 2.5-4 years and their MLU was more than 2 morphemes. Subjects were excluded if they had the following problems: brain damage, psychomotor, intellectual, neurological and speech and language disorder, speech and language delay, visual and hearing impairment, and emotional problems. Prior to participating in this study, all subjects’ parents signed the informed consent form approved by the Ethics Committee of The University of Social Welfare and rehabilitation sciences. All information were obtained by interviewing the parents and teachers, observing children and examining their medical and psychological health records.

As we have no formal instrument for evaluating dependent possessive pronouns, the instrument used in this study was a researcher-made task for examining the development of dependent possessive pronouns. The validity of the task was approved by three speech language pathologists who were expert in the field of child language. Before performing the task, a pilot study was conducted on 22 typical children at the age of 2.5-4 years. This pilot study showed the task was provided as an easy answering situation for children. Every word question was guessable and it was in the 2.5-4 years-old children lexicon. Therefore, questions were about human body parts, such as “hands and eyes” that were understandable even to the youngest participants; and question verbs were about routine actions and plays, such as “elevating, closing, and hiding”. The examiner and two colleagues (pediatrics psychologist) asked every child questions about 6 dependent possessive pronouns. A sample of the questions is provided in the appendix.

The study was conducted individually in a calm environment. In order to familiarize the child with the task, the examiner asked the questions from her colleague. For every pronoun there were 3 questions,

Appendix

Table A: The dependent Possessive Pronouns Task

Plural dependent Possessive Pronouns			Singular dependent Possessive Pronouns		
Instruction	Questions		Instruction	Questions	
/-æm /	The child imitates examiner's action and the examiner asks him/her these questions	1-What did you elevate? 2-What did you hide? 3-What did you close?	/-eman /	Both child and examiner perform the action and the examiner asks him/her these questions	1-What did we elevate? 2-What did we hide? 3-What did we close?
/-et /	The examiner perform the action and asks the child these questions	1-What were I rose? 2-What did I hide? 3-What did I close?	/-etan /	The examiner and one of her colleagues perform the action and they ask the child these questions	1-What did we elevate? 2-What did we hide? 3-What did we close?
/-eʃ /	One of the colleagues performs the action and the examiner asks the child these questions	1-What did she elevate? 2-What did she hide? 3-What did she close?	/-eʃan /	Both colleagues perform the action and the examiner asks the child these questions	1-What did they elevate? 2-What did they hide? 3-What did they close?

and participants have to give their answers after hearing the first question, and if they couldn't understand the first question, the two other questions about the same pronoun were asked. A correct response would receive a score of 1, and incorrect response or no response to any of the three questions for one pronoun would be scored 0.

All data were analyzed using SPSS version 22. For describing data; frequency tables, central tendencies, indices of dispersion and charts were used. The level of significance in all analytical tests was set at $P < 0.05$. The Kolmogorov-Smirnov test was done to determine normal distribution of data. Since the P-value of this test was $P < 0.05$, non-parametric tests were used for analytical statistics. The Spearman's correlation test was used to examine correlation between age and the correct use of dependent possessive pronouns. The Mann-Whitney test was used to examine significant differences between girls and boys in the correct use of these pronouns. The Kruskal-Wallis test was used to examine significant difference between the three age groups and the Cochran test was used to examine significant difference between the correct using of six types of dependent possessive pronouns.

Results

Table 1 shows the percentage of dependent possessive pronouns correct use for the three age groups, grouped by gender.

As table 1 shows in group 1, both girls and boys used the 1st person pronoun /-æm / and 3rd person pronoun /-eʃ/ 100% correctly and after that, the highest percentage of correct use was for 2nd person singular /-et /, 3rd person plural /-eʃan /, 1st person plural /-eman /, and 2nd person plural /-etan /, respectively.

In group 2, both girls and boys used the singular pronouns (/æm /, /et / and /eʃ/), and 3rd person plural /eʃan /, 100% correctly and after that, the highest percentage of correct use was for the 1st person plural /eman /, and 2nd person plural /etan /, respectively.

In group 3, the girls used all the pronouns 100% correctly. The use of the 1st person and 2nd person plural

(/-eman/ and /-etan /) was not still 100% correct in boys, but the percentage of the correct use of these pronouns increased compared to the previous age group.

There was a significant difference between the frequency of correct use of 6 types of dependent pronouns ($P = 0.0001$). Figure 1 and table 1 confirm this finding.

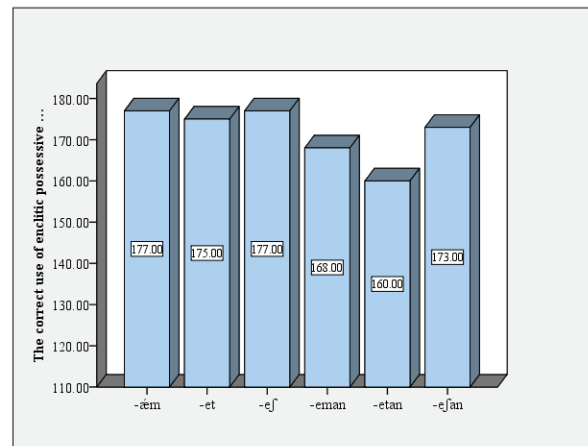


Figure 1: The frequency of correct use of 6 types of dependent possessive pronouns

Table 2 shows the correct use of dependent possessive pronouns based on age and gender.

As figure 1 and table 2 by increasing the age both girls and boys got higher mean scores in correct use of dependent possessive pronouns, which means that as age increases, the number of correct use of these pronouns increases too. There was a correlation between age and correct use of dependent possessive pronouns ($P = 0.0001$). There was no significant difference between boys and girls ($P > 0.05$), but there was a significant difference between the three age groups in regard to the correct use of these pronouns ($P = 0.0001$).

Discussion

The results of this study showed that there was no

Table 1: The Percentage of dependent possessive pronouns correct use

Possessive pronouns	Boys						Girls					
	-æm	-et	-æʃ	-eman	-etan	-eʃan	-æm	-et	-æʃ	-eman	-etan	-eʃan
2.5-3 yrs	100%	95%	100%	85%	80%	90%	100%	95.8%	100%	87.5%	66.7%	91.7%
3-3.5 yrs	100%	100%	100%	96/9%	90/6%	100%	100%	100%	100%	91.7%	91.7%	100%
3.5-4 yrs	100%	100%	100%	96/8%	96/8%	100%	100%	100%	100%	100%	100%	100%

Table 2: The mean of dependent possessive pronouns correct use by age and gender

Age group	Gender	Number	Mean	Standard deviation	Range
2.5-3	Girls	24	5.4	0.88	3
	Boys	20	5.5	0.94	3
3-3.5	Girls	35	5.9	0.23	1
	Boys	32	5.8	0.42	2
3.5-4	Girls	35	6	0	0
	Boys	31	5.93	0.24	1

significant differences between the mean scores of the girls and boys on this task. Therefore, gender is not an effective factor in the correct use of these pronouns. The Spearman's correlation and Kruskal–Wallis tests results indicated that age was an effective factor in the correct use of these pronouns. In addition, according to the percentage of frequency presented in table 1, as the children are growing from 2.5 to 4 years old, their correct use of the pronouns increases too. Moreover, the findings indicate that the girls can use all the pronouns correctly by the age of 4, while the correct uses of 1st person plural /-eman / and 2nd person plural /-etan / in boys are greater than 90%. According to Owens, this is considered as pronoun mastering [1]. The Cochran test results indicated that there was a significant difference between the correct use of the 6 types of dependent possessive pronouns, however, the percentages of their correct use were not the same. According to table 1, /-e/ and /-æm / had the most correct use and /-etan / had the lowest correct use. The order of the correct use of dependent possessive pronouns was from singular to plural, and the highest percentage of correct use was for /-e/ /, /-æm /, /-et /, /-e/ān /, /-eman/, and /-etan /, respectively. The results also indicated that even in the youngest group, there was no child who couldn't use all the pronouns correctly, and the lowest score of correct use of pronouns in the youngest age group was 3. Moreover, in all age groups, the youngest children got the lowest score of correct use of the pronouns. There was no significant difference between boys and girls, but there was a significant difference between the three age groups in regard to the correct use of these pronouns.

The mean scores of the 3 age groups indicate that by the age of 4, more than 95% of the children in this study can use Persian dependent possessive pronouns correctly. The acquisition age of possessive pronouns in the English is between 2-4 years [10,11,14]. In a study on 2 Persian-speaking children between 12-36 months, it was shown that the age of acquisition of dependent possessive pronouns was before 36 months of age, but some of the pronouns were less frequently used in children's speech [8]. Some other studies in Persian [20,22] and English [13] have reported that the age of possessive pronouns acquisition is before 30 months. Consistent with Wells [11] and Jalilevand [8,19], the results of this study showed that the order of pronouns acquisition is from singular to plural, and consistent with Chiat [12], Wells [11], Charney [17], and Jalilevand [8,19], the order of person in pronouns acquisition is as follows: 3rd person, 1st person, and 2nd person. More ever, this order of acquisition is consistent with Deutsch principles of linguistic contrasts, which state that proximal, singular, and speaker pronouns would

be acquired earlier [6]. However, in Spanish [15], Chinese [16], and French [18] the order of pronouns acquisition is 1st person, 2nd person, and 3rd person. In Persian, the acquisition of the 3rd person is earlier, and this can be due to the fact that Persian is gender-neutral [8]. It should be noted that this study performed with a limited sample size so for generalizing and using these results, caution is recommended. It is suggested that future studies have more sample size and perform in other cities of Iran and examine the impact of socio-economic factors and practice on the development of these pronouns in typical and speech and language disordered children.

Conclusion

According to results of this study, it seems that in Persian, as the children used 1st and 3rd person pronouns 100% correctly, so the dependent possessive pronouns acquisition begins before the age of 2.5 years, and children master in using these pronouns at the age of 4. In addition, the order of acquisition and the correct use of these pronouns are important, and must be considered in screenings and for clinical works.

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