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Original Article

Distribution of different types of expressive lexicon in 18–24-month-old Sorani-Kurdish-speaking children

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ABSTRACT

Background: In the age of 18–19 months, a child's lexicon increases by acquisition of five words per week. Linguists consider this a period of vocabulary spurt. In the early stages of language acquisition, the diversity of vocabulary also increases in addition to an increase in the number of words. The goal of the present study was to examine the distribution of different types of expressive words in 18–24-month-old Sorani-Kurdish-speaking children.

Methods: The present research was conducted in a longitudinal form (for three months) on 16 Kurdish infants of Bukan 81 fo syob ruof dna slrig ruof(syob ruof dna slrig ruof dna ,ega ni shtnom of 21 months). Normal children were selected, based on their health and demographic records. The data collection materials included a weekly vocabulary recording sheet, a vocabulary list, and a demographic questionnaire. All the data were analyzed using **SPSS** version 22 software, with the significance level set at *0*. 05. Since the data were normally distributed, ot detcejbus erew selpmas tnednepedni T-tests and repeated measures ANOVA were used to compare the vocabulary distribution (nouns, adjectives, verbs, and adverbs) in gender and age groups.

Results: There was no significant difference between genders in the number and type of words (P>0.05). In both groups, with increasing age, the number and variation of the words increased (P<0.05). The most frequently expressed words were nouns, adjectives, verbs and adverbs. Among the expressed nouns, the most common ones were food categories (19.51%). Of the expressed adjectives, the most common ones related to condition. Among the expressed verbs, the most common ones were imperatives (80%) and positives (90%). Among the expressed adverbs, the most common ones were adverbs of place (90%).

Conclusion: It seems from the findings that the distribution and diversity of vocabulary categories follow a pattern similar to other languages.

Introduction

According to researchers, a word is a primary phonetic form that is used to refer to special objects or events, or to classify things. During the age of 18–19 months, there is a sudden increase in the rate of vocabulary acquisition. During this period, a child's lexicon increases by the acquisition of five words per week. Linguists call this period as a period of vocabulary spurt. In the early stages of language acquisition, in addition to an increase in the number of words, vocabulary diversity also increases [1].

The first words expressed by children are mostly about things they are familiar with or things they can do. Hence, the first words children pick up are very similar [2].

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Nelson examined 50 early words in 15–24-month-old children and found that common nouns including the names of appliances, materials (milk and snow), animals, numbers and letters, abstract words, and pronouns constituted (51%), proper nouns including the names of people and pets (14%), verbs (13%), adjectives (9%), social status including affirmation (yes, no) and social expression (please, ouch) (8%), and grammatical words (4%) [3].

Some studies have been conducted on the speech and language development in children in the Persian language, too. Jalilevand found that children's most frequently used words until the age of 24 months included nouns and there appeared other types of words including verbs, adverbs, interrogative words, and social words [4].{Jalilevand, 2012 #11} Sorayya et al. found that the category of common nouns had the biggest portion and the category of grammar words had the least part in the size of expressive lexicon in children of the 18–36 age group [5]. Mahdipoor and Shirazi determined the most frequently used words by 18–24-month-old children; their results indicated that, among the 50 words with the highest percentage of use, the words related to important persons (mɑ:mɑ:n and bɑ:bɑ:), play (dædær,dɑ:li:) and food (bæh bæh ,ɑ:b) were the ones most frequently used. Verbs constituted only 4% of the 50 most frequently expressed words. The category of childish words had the maximum number, and the categories of natural phenomena, clothes, and grammar words had the least number of words, and there was no significant difference between boys and girls [6].

Research on the development of early vocabulary, based on the Communicative Development Inventory (CDI), have shown that, although the overall pattern of vocabulary and language development is similar in different languages, there are differences in terms of receptive and expressive lexicons and vocabulary diversity, and this diversity is related to cultural differences and differences in the morphology and structure of different languages [7].

Different languages such as Persian and Kurdish differ in terms of consonant clusters, development of phonetic systems (initial consistent cluster in the Kurdish language) and in terms of the number of consonants and vowels (the Kurdish language is composed of 29 consonants and eight vowels) [8]. The question is whether these differences have any impact on the development of expressive lexicon? Since we could not find any previous study on the development of expressive vocabulary in Kurdish-speaking children, the goal of the present research was to study the development of vocabulary in 18–24-month-old Sorani-Kurdish-speaking children.

Methods

The present research was conducted in a longitudinal form (for three months) on 16 Kurdish infants of Bukan. The sample size was determined as 16, and the participants were divided into two groups: 18 month-olds and 21 month-olds. The number of boys and girls in the two groups was equal (four girls and four boys in each group). A random sampling method was used; we referred to the health centers in different parts of Bukan and obtained a list of 18- and 21-month-old children, who had a normal development, according to health records. Then, we contacted the families of the children and tried to determine whether a child met the inclusion criteria with the help of interviews and a questionnaire. The inclusion criteria were as follows: normal speech and language development, normal psycho-motor development, a good medical history, a good behavioral, social, motor, and affective condition, and parents' agreement and promise to cooperate during the three-month of study at their homes. The children who met the inclusion criteria were included in the study. In order to respect the ethical principles (IR.USWR.REC.1393.197), a family was free to withdraw from the study, if it did not want to continue. The instruments used in this study included a demographic questionnaire (seeking demographic information, questions about children's exposure to Farsi [Persian movies and books] and questions for assessing inclusion and exclusion criteria), a vocabulary list, and a weekly vocabulary recording sheet. The vocabulary list was designed, based on the expressive vocabulary list of Persian-speaking children of Tehran in the study by Shirzi and Mahdipoor [5,6]. This list was first translated into Kurdish. Three people, including two Kurdish-speaking speech pathologists and a Kurdish-speaking parent (mother), examined the content validity of the list. Every vocabulary item receiving a score of 99% from the experts (CVR=0.99), was accepted. The list that was thus developed was tested on two children (girl and boy). During a meeting, the parents were instructed on how to file reports and complete checklists. Then, the mothers were given the vocabulary list and a weekly vocabulary recording sheet, and were asked to determine and record, during the following week, the new words their children used constantly for the same referents. Finally, the data were examined using an independent sample T-test, and were analyzed using SPSS version 22 software.

Results

After collecting the data, when a child continuously used a word similar to the word used by adults, in relation to a specific referent, the word was accepted as a target word. Finally, a total of 200 words were used by children from all the 378 high-frequency words studied in an article published in the Koomesh journal, and the 200 words were examined in this study [9].

The results of the Shapiro-Wilk test indicated the normality of the data (P>.05). Parametric tests were, therefore, used to interpret the data. First, the average number of words used by children during the three-month follow-up were compared using a repeated measures ANOVA in order to examine the impact of age on the number of words expressed by the 18–21and 21–24 month-old children (girls and boys) (Table 1).

In the age group of 18–21 months, the average number of words used by children increased from 29 to 70.88, and this increase was statistically significant (P<0.5).

Table 1: Comparison of the average number of words expressed by girls and boys 18 to 24 months

d f	F	P value	Third month M (SD)	Second month M (SD)	First month M (SD)	Age
2	52.22	0.0001	70.88 (37.09)	48 (31.609)	29 (24.31)	18-21 month
2	50.77	0.0001	128 (57.06)	110 (51.96)	96.50 (50.61)	21-24 month

Similarly, in the age group of 21–24 months, the average number of words used by children increased from 96.50 to 128, and this increase, too, was statistically significant (P<0.5).

In line with the objectives of the study, different vocabulary categories in the age group of 18–21 and 21–24 months were analyzed in both genders. In this age group, a word used at least by one of the participants in that specific group was regarded as a word in the lexicon of that specific age and gender group, and was analyzed according to its vocabulary category. The results of statistical analyses are provided in the following pages.

In linguistic texts, words are divided into four main categories: nouns, verbs, adjectives, and adverbs [8]. Keeping this in mind and using a T-test, we analyzed the different types of words used by the 18–21 and 21–24-month-old girls and boys, during a three-month follow-up. According to the results of statistical analyses, although the average number of nouns, adjectives, verbs, and adverbs was higher among girls than boys, these differences were not statistically significant (P>0.05). So, the distribution of expressive vocabulary was studied, regardless of gender. Studies show that most of the types of expressive vocabulary in the age group 18 to 21 months included nouns (69%), adjectives (16%), verbs (11%) and adverb (3%) and in the age group 21 to 24 months included nouns (66%), adjectives (15%), verbs (15%) and adverb (3%).

Since there was no significant difference between the number of nouns used by the 18–24-month-old girls and boys, the distribution of different types of nouns in different categories was analyzed without considering the gender (Figures 1, 2).

According to Figure 1, in 18–21-month-old children, among the 82 words related to nouns, 16 words were in the food and animals categories (categories with the

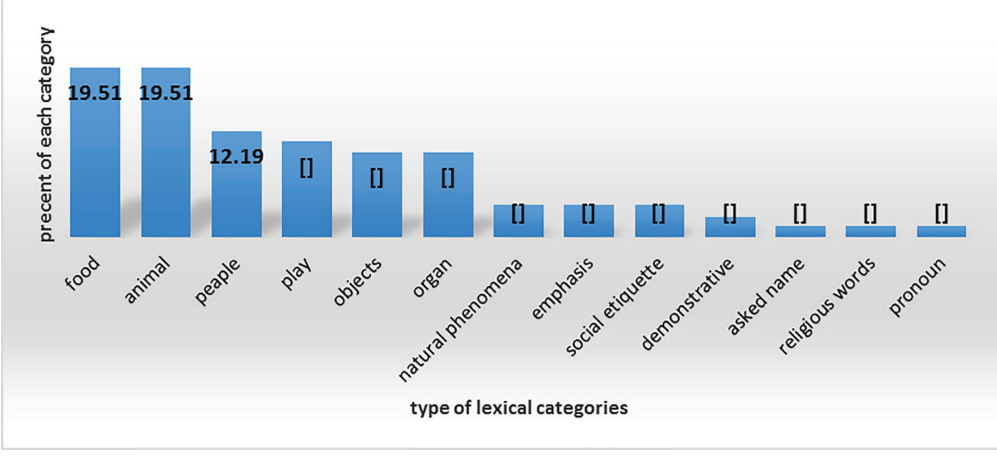

Figure 1: Distribution of names in different classes in the age group 18 to 21 months

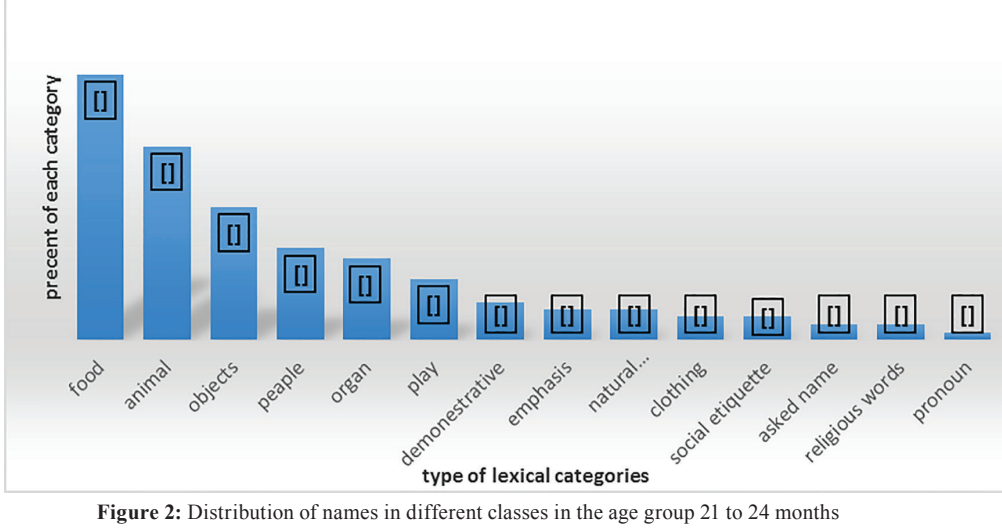

Figure 2: Distribution of names in different classes in the age group 21 to 24 months

most words), and the least frequently used categories were pronouns, interrogative words, and religious words, each with one word. And, according to Figure 2, in 21–24-month-old children, the highest percentage of use was for the food category with 34 words, and the lowest percentage of use was for the pronoun category with one word.

In the age group of 18–21 months, among the 19 adjectives, the used ones were related to condition (53%), numbers (21%), color (10%), and contrast (5%); and in the age group of 21–24 months, among the 31 adjectives, the used ones were adjectives of condition (32.25%), contrast (29%), numbers (19.35%), and color (12.9%).

In linguistic texts, verbs are divided into three categories: past, present, and future. The most frequently expressed verbs among 18–24-month-old children were in the present tense, and among them, imperative verbs were the most frequently used ones and the most frequently expressed verbs were positive. An examination revealed that all the adverbs used by the 18–21-month-old children were adverbs of place (e.g., here, above). The adverbs used by the 21–24-month-old children were divided into two groups: adverbs of place and adverbs of time, with frequencies of 85.71% and 14.28%, respectively.

Discussion

The main goal of the present study was to examine the expressive vocabulary of 18–24-month-old Surani-Kurdish speaking children, and we examined the distribution of expressive words in girls and boys. One of the most important findings of the study was the lack of any significant difference in the number and type of expressive vocabulary between girls and boys. The findings also showed that the number of expressive words increased with age and it was also found that for both age groups (18–21-month-olds and 21–24-month-olds), nouns were the most frequently used words (70%), but the number of verbs increased with age. In fact, the vocabulary diversity also increased with age. These findings are consistent with the results of previous studies, including Shirazi, Sorayya, Jalilehvand, in Persian [4, 6]; and Meiser in German [1]. This finding is different from the results of examinations of vocabulary in Japanese. In fact, in Japanese, verbs are initially the most frequently expressed words, which may be due to the fact that, in Japanese, nouns are removed from speech, and there is an emphasis on expressing verbs [7]. Among the words expressed by the participants, the food and animal categories had the highest percentage of use (20%). In the age group of 18–21 months, there were 13 categories of nouns, and, in the age group of 21–24 months, the clothes category was also added. We can, therefore, argue that the vocabulary diversity increases with age, and this is consistent with the results of previous studies in Persian, German, and English [1,3,7].

After nouns, the most frequently used words, in both age groups, were adjectives. In the age group of 18–21 months, the adjectives of condition, number, color, and contrast, and in the age group of 21–24 months, the adjectives of condition {(ouch), contrast {(hot)}, number {(1, 2, 9)}, and color {(blue), (red)}, were the most frequently expressed adjectives. The findings indicate that the way children use adjectives changes as they get older. In fact, younger children tend to use adjectives that are easy to pronounce, and as they get older, they use adjectives with harder pronunciations. Therefore, the adjectives of contrast, which are both harder and less concrete, are more frequently expressed by older children, and this is consistent with the Piaget's stages of cognitive development in children under two years of age. These findings are also consistent with the studies of Shirazi in Persian, and Meiser in German [1,6]. After adjectives, the highest percentage of usage was for verbs, and, among verbs, imperative verbs were the most frequently used. The description of movement is one of the most important characteristics of verbs, and imperative verbs are also very concrete. We can, therefore, argue that this finding is consistent with Piaget's view that children under two years of age are fascinated by movement, and, in this period of life, the most frequently expressed verbs are related to movement [2]. Adverbs were another category examined in the present study. In the age group of 18–21 months, all the expressed adverbs were adverbs of place, and in the age group of 21–24 months, in addition to adverbs of place, adverbs of time were also expressed. In fact, like in other categories, with the increase of age, the vocabulary diversity increased, too, and this is consistent with the results of previous studies in the Persian, English, and German languages [1,3–7].

Despite a similarity in the development of early vocabulary between different languages, there are also differences. Overall, the findings revealed that in the Kurdish language, like in most other languages, the most frequently used words by children were nouns [1,3–7].

The study results can be useful in providing information for making a scale to diagnose language disorders. The results can also be used in a stage-by-stage designing of therapies, designing and creation of therapeutic software and training programs of the Kurdish language for children in the early stages of development, and providing educational and story books for Kurdish-speaking children of 18–24 months in age.

This study is the first on word acquisition by Sorani-Kurdish-speaking children. This study has been done within a short time period and with a small sample size. Therefore, we must be cautious in generalizing the results. A study with a larger sample size and other Kurdish dialects is recommended.

Conclusion

In the present study, no significant differences were found between the 18–24-month-old girls and boys in the number of expressive words used. We can also conclude that, with an increase in age, children are able to use more diverse words. Children initially tend to use words that are related to the important things in their lives (food), and also words that have a simple syllabic and phonetic structure (animal's sounds), and are concrete enough for them (verbs,

adjectives related to contrast, and adverbs of place).

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Conflict of interest: None declared.

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