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## Acquisition of Coordination in Turkish Children: Additive Connectives

Hatice SOFU\*, Tuğba ŞİMŞEK  
Department of English Language Teaching, Cukurova University,  
Adana, Turkey

\*Corresponding author: hasofu@cu.edu.tr

### ABSTRACT

The aim of this study is to investigate the acquisition of additive connectives by Turkish children between the ages of 2;0 and 6;0. After children start to combine words together, they make some semantic relations between them; and coordination is one of them. In this study, acquisition of additive connectives is under investigation in terms of their emergence, frequency, variety of types, and divergent uses of them. In the study data taken from CHILDES for 2;0 to 4;8 old children; and data collected by the researchers from children at the age between 4;6 and 6;0 have been used. The study results show that *da*, *ve*, *ile* and *bir de* are the first additive connectives used by Turkish children. Also, *da*, *sonra*, *ve* and *bir de* are the most frequently used additives respectively while *bile* and *-arak* affixes are used only one time. The variety of the connectives firstly shows an increase, then a stabilization; at the end a decrease. Apart from the additive connectives listed in the literature, the children also use some other tools such as *ondan sonar* (and then) and *başka* (other) to coordinate linguistic units.

**Keywords:** Acquisition, Coordination, L1 Turkish, Additive Connectives

### Introduction

Connectives are the functional words used to coordinate linguistic units such as words, phrases, clauses, and paragraphs (Crystal, 2003) and they are used to make semantic relations between two or more propositions (Halliday & Hasan, 1976). Connectives are generally classified under four categories (Halliday and Hasan, 1976; Rudolph, 1996; Bloom, Lahey, Hood, Lifter, & Fiess, 1980): Additives, adversatives, causal connectives, and temporal connectives.

Coordination is an important component of language acquisition since children's generative capacity increases with this ability. Cross-linguistic studies indicate that juxtaposition, "and", and "and then" are the earliest tools for children to coordinate propositions, all the earliest tools have additive functions. In this study, acquisition of additive connectives by Turkish children has been investigated between the ages 2:0 and 6:0.

Generally, connectives are single words to make connections between propositions, they may seem that they are little words; however, they have a crucial role to make semantic relations. According to Pak, Sprott and Escalera (1996) connectives serve at both "ideational level" to coordinate semantic relations and "interactional level" to coordinate speech acts. Sprott (1992) suggests that investigation of connectives is quite important in language acquisition being one of the most important issues pointing out the relationship between form and function.

Bloom, Hood, and Brainerd (1979) conducted a longitudinal study on acquisition of connectives and sequence of them with four children aged between 2;1 and 3;5. Four main types of connectives have been identified: additives, adversatives, causals, and temporal additives. According to that study, the acquisitional sequence of the connectives is additives,

temporal, causal, adversative. As it is seen, additive connectives are the first connectives to make coordination between propositions. According to much research (Bloom et al., 1979, Clancy et al. 1976, Tager-Flusberg, 1993) “and” is the connective which is acquired earliest by children in many languages such as English, Dutch, Italian, Turkish, and Japanese. It is an additive connective; however, it was reported to be used for different semantic functions before children acquire the appropriate connective such as adversatives, temporal additives, and causals. The same results have also been reported for the acquisition of English by many researchers (Beilin, 1975; Clark, 1970; Hood, Lahey, Lifter, and Bloom, 1978; Jacobsen, 1974). Parallel results have also been found in studies on other languages such as in Swedish (Johansson and Sjölin, 1975), in Italian (Clancy, 1974), and German (Werner and Kaplan, 1963). Researchers stated that children firstly juxtaposed propositions with or without explicit connectives; then they used symmetrical coordination, antithesis, sequence, and causality; next conditional notions; then conditional and temporal notions. However, Ma Siu (1996) states that in Cantonese children do not firstly use “and” to coordinate linguistic units, instead, they juxtapose them as Cantonese does not require explicit connectives to conjoin propositions or phrases. Similar results were found by Su (1999) in Mandarin. In both of these studies, it is claimed that “and” is used for additive purposes only; unlike English in which “and” is claimed to be used for different functions.

In Turkish, Aksu-Koç (1978) investigated use of causal additives in Turkish and found that Turkish children also firstly use juxtaposition to make causal relations, then context dependent connectives, and lastly context independent connectives respectively. Sofu (1995) found in her PhD thesis on acquisition of Turkish lexicon that children firstly simply juxtapose units to coordinate, then they started to use different connectives such as “ve” (and), “ama”(but), “çünkü” (because). Slobin and Aksu-Koç (1985) conducted another study on causal connectives and found that Turkish children acquire connectives quite early as Turkish is a remarkably transparent language. The results showed that children firstly juxtapose propositions, then use connectives without subordination, lastly with subordination.

In Gökmen (2007) it is found that connectives are the fourth most frequently used word class used by 4-year-old-children, meanwhile, clitic *da* was found to be used most productively by her participants. *Ama* and *ile* are the second most frequent connectives used by 4-year-old Turkish children. According to that study, at the age of 5, the number of connectives used by Turkish children decreases due to an increase in use of adjectives at the same time. The results also show that at the age of 6 the children used *ama* most frequently, then clitic *da* as connectives. As it is seen most frequently used connectives include generally additives such as *da* and *ile* which serves as additive “and”.

In their study Özbek, Zang, and Demirtaş (2014) investigated additives in five Asian SOV languages (Qiang, Jingpho, Turkish, Uyghur, and Japanese), and the focus was on *da*. It has been found that in all these languages *da* is used as an additive connective which can be used with one or more subjects, objects, verbs, numerals and question words.

### **Purpose of the Study**

The purpose of this study is to investigate the acquisition of additive connectives by Turkish children. The frequency and variety of the connectives are explored among age groups. The use of additive connectives has also been explored in detail to find out if the Turkish children make any mistakes in use of connectives or not. For that purpose, answers have been sought to the following questions:

1. Which additive connectives are used earliest by Turkish children?
2. Which additive connectives are used most frequently by Turkish children?
3. Does the variety of additive connectives increase when children get older?

4. Are there any divergent uses of additive connectives by Turkish children compared to the list given in Göksel and Kerslake (2004)?

### Methodology

#### Data Collection

In this study two different data sources are utilized: the first one is the data consisting of 54 samples collected by Aksu-Koç (1972-73) from 37 children between ages 2;0 and 4;8. The data have been downloaded from CHILDES and analyzed with CLAN program to calculate MLU and to find frequencies. The researchers of this study calculated the Mean Length of Utterances (MLU) of the subjects and grouped them into successive stages according to MLU results as shown in Table 1:

*Table 1*

Age Range, Mean Age, and Mean Lengths of Utterances of the Subjects in CHILDES

	STAGE I (MLU 1;0-2;0) N:7	STAGE II (MLU 2;0-2;5) N:27	STAGE III (MLU 2;5-3;0) N:11	STAGE IV (MLU 3;0-3;5) N:9
Age Range	2;0-4;4	2;0-4;8	2;0-4;4	3;4-4;8
Mean (SD) Age	2;7 (0,7)	3;3 (0,7)	3;7(0,6)	3;9(0,4)
MLU (SD)	1.76 (0,13)	2.77(0,15)	2.24(0,15)	3.21(0,13)

The other data samples were collected by the researchers from 50 preschool children (10 females and 10 ten males) between the ages of 4;6 and 5;10. The researchers had daily conversation with each child around 5 minutes, and then asked them to tell the story from a story book which has colorful pictures with many characters. Each recording was around 10-15 minutes. As the MLU calculation is found inconvenient after Stage V, MLUs were not calculated, instead the age intervals were used to group children. The ages of children at the preschool were identified and they were grouped with 6 month intervals. In Table 2 the age and the categorization of the children in terms of age and gender can be seen:

*Table 2. Information About the Participants in terms of Age and Gender*

AGE GROUPS								
4;6-5;0			5;0-5;6			5;6-6;0		
Participant	Gender	Age	Participant	Gender	Age	Participant	Gender	Age
Part. 5	F	4:6	Part. 2	M	5:1	Part. 7	M	5:6
Part. 20	F	4:7	Part. 6	F	5:1	Part. 8	M	5:7
Part. 11	M	4:8	Part. 3	M	5:3	Part. 14	F	5:7
Part. 9	F	4:10	Part. 4	F	5:5	Part. 13	M	5:8
Part. 1	F	4:10	Part. 10	M	5:5	Part. 18	M	5:10
Part. 17	M	4:10	Part. 16	F	5:5			
Part. 15	M	4:10	Part. 19	F	5:5			
			Part. 12	F	5:5			
7 Part.	4F-3M		8 Part.	5F-3M		5 Part.	1F-4M	

In Table 2 it is seen that in the first age group (ages between 4;6 and 5;0), there are 7 children, 4 females and 3 males. In the second group (ages between 5;0 and 5;6), there are 8 participants, 5 females and 3 males. Lastly, in the third age group (ages between 5;6 and 6;0),

there are 5 participants, 1 female and 4 males. The youngest child is 4;6 years old and the oldest one is 5;10.

### Connective Selection and Classification

Different classifications of connectives have been done in the literature so far; in Turkish two detailed studies make clear the analysis of coordination and connectives in detail. Kornfilt (1997) states that in Turkish there are three possible ways: first one is juxtaposition, simply sequencing the propositions; second one is use of Arabic “ve” (and); and the last one is clitic *dA* which function as an additive. Some other connectives such as *hem... hem de* (both...and), *ne...ne* (neither...nor) were also listed as coordination tools.

Göksel and Kerslake (2004) also made a detailed classification of connectives in Turkish. They categorized connectives into 13, namely: additive, enumerating, alternative, adversative, expansive, causal, inferential, temporal, conditional, organizational, corroborative, reminding, and constructive. As the classification is more clear and detailed, the list of connectives has been taken from Göksel and Kerslake (2004). In this study, the focus is on additive connectives as they are reported as the ones acquired earliest and used most frequently. The additive connectives are: *ve* (and), *ile -(y)lA*, *dA* (clitic), *bile* (even), *ve de* (emphatic form of ‘ve’), *bir de* (introduces afterthought), *ya* (speculative question), *üstelik, üstüne üstlük, hem, hem (de), buna ek olarak, ayrıca, kaldı ki* ‘and (what’s more, also), *sonra* (then), *hatta, dahası* (even, indeed), *şöyle dursun/bir yana/bırak(in)* (let alone).

### Results and Discussion

In this study, Turkish children’s acquisition of additive connectives has been explored, the age range was between 2;0 and 6;0. The first samples between the ages 2;0 and 4;8 were taken from CHILDES, the results have been analyzed according to MLU stages of the children. In Table 3, the types, frequencies and percentages of the additive connectives used by Turkish children are displayed:

As it is seen clearly in Table 3, at the first stage (MLU 1.76) the children used only 18 additive adjectives and average use was 2,57 additives including 4 types of it *ve, ile, bir de* and *de*. This is 2,37% of all the additives used in this study. The mostly frequently used additive was *dA* (*ve*) and *bir de* (*also*) followed it.

Instead of using explicit connectives, mostly children depended on juxtaposition to make additive relations as it is seen in the example1:

*Top var, bebekler var, çay var, çay fincanları var.*

(Ball there is, dolls there are, tea there is, tea cups there are.)

There is a ball; there are dolls, tea, tea cups.)

Table 3

*Additive Connectives Produced by Turkish Speaking Children between the Ages of 2; and 4;8*

STAGE I	STAGEI	STAGEII	STAGEIV	Tot.
MLU1.7	I	I	MLU 3.21	F
6	MLU	MLU	N:9	
N:7	2.24	2.77		
	N:27	N:11		

Additiv	Ve	1	Ve	3	ve	0	Ve	2	6
e	Ile	1	Ile	1	Ile	4	Ile	2	8
	Bile	0	Bile	1	Bile	4	Bile	3	8
	Bir de	5	Bir de	26	Bir de	22	Bir de	16	69
	de	11	de	168	De	123	De	146	448
	Hem	0	Hem	1	Hem	0	Hem	1	2
	Hem de	0	Hem de	4	Hem de	2	Hem de	4	10
	Sonra	0	Sonra	88	Sonra	65	Sonra	54	207
Total F.		18		292		220		228	758
Average		2,5		10,8		20		25,3	14,0
		7		1				3	3
%		2,3		38,5		29,0		30,0	
		7		2		2		7	

In the second stage (MLU 2.24) children became more productive in terms of additive connectives and used 8 different types, 292 times with 38,52% and the average use was 10,81. Compared to first stage, the children used additive connectives much more productively as the average increased from 2,57 to 10,81. They used *ve*, *ile*, *bile*, *bir de*, *de*, *hem*, *hem de*, and *sonra* to indicate symmetric semantic relations.

In the third stage (MLU 2;77), 6 different types of connectives were used 220 times, and the use was 29,02% of all the additives; average use was 20 additives. There was an important increase in average use of additives in this stage when compared to stage 2. The most frequently used additive was again *dA*, secondly *sonra* was used as the second most frequently used additive. In this stage *ve* was not used at all.

At the last stage (MLU 3;21) children used 8 types of additives 228 times and it constituted 30,07% of all the additives, average use was 25,33. The number of types and average frequency increased again compared to stage 3. Similar to first three stages, *dA* was again the most frequently used additive connective, and *sonra* followed it.

Among all the additives used by Turkish children between the ages of 2;0 and 4;8, *dA* was preferred remarkably frequently with 59,10%. As Özbek et al. (2014) stated *dA* can be used productively with different kinds of word classes as a result, the frequency of additive *dA* sharply high compared to other additives. And the second additive 27,30%, is *sonra* which has also different semantic relations and normally used for temporal relations. However, the children use *sonra* frequently to make addition relations.

Contrary to previous study, the use of *ve* (*and*) is not as high as stated in those studies (Clay et al, 1976; Brown et al., 1979). Instead of using *ve*, the children generally used juxtaposition, and then they started to use *dA* on behalf of *ve*. These results are parallel with Ma Siu (2006) and (Su, 1999) who made studies in Cantonese and Mandarin respectively as those languages do not require an explicit connective make coordination between units as well.

In the second set of data, the data was collected by the researchers from 20 Turkish preschool children, children were grouped into three according to their age intervals 4;6-5;0, 5;0-5;6, and 5;6-6;0. There are 6 month intervals between groups. The results were analyzed according to frequency and percentage of the additive connective use of children, also average use of additives was also calculated as the number of the participants among groups was not equal. There were some additive connectives which were not used in any age group, these connectives are *hem*, *ek olarak*, *ayrıca*, *kaldı ki*, *hatta*, (-)p.

In the following section the results of the group are shown in detail. In Table 4, the additive connectives used by the age group 4;6-5;0 are shown:

Table 4

*The Results of Additive Connectives The Most Frequently Used by Age Group 4;6-5;0*

	AGE GROUP 4;6-5;0		N:7
Additives	Total Frequency	Average	%
da	64	9,14	43,53
sonra	41	5,85	27,89
bir de	23	3,28	15,64
ve	9	1,28	6,12
hem de	4	0,57	2,72
ile	4	0,57	2,72
bile	1	0,14	0,68
(-)arak	1	0,14	0,68
Total	147	21	

In Table 4 additive connective use of children at the ages between 4;6 and 5;0 is displayed. There were 7 children in this group and 147 additive connectives were used in total; average frequency was 21. 8 different types are used by children while 7 connective types are not used by any of the children in the group. The connective, *da* has the highest frequency (N: 64) as it constitutes 43,53 % of all additives in this age group. The second most frequently used additive is *sonra* which is used 41 times and constitutes 27,89 % of all additive connectives in age group 4;6-5;0. In the whole data there was only one use of *-arak* subordination affix which is used to express addition, and it was used by Part. 9:

Cem koşarak anneannesinin yanına gidiyor.

(Cem run-arak Sub. Grandmother+ACCUS. Near+dativ go+ing).

(Cem is running up to his grandmother.)

The scarcity of this kind of coordination is explained by Slobin and Aksu-Koç (1985) that children firstly use single words such as connectives instead of affixes to make subordinate clauses. Another connective used only one time in the collected data was *bile* (even), and it was again used by Part. 9 who used 36 connectives in total which constitutes 24,48% of all connectives in this group. The use of *Bile* has been shown in the following example:

Arda çok büyüdü yürüyor **bile**.

(Arda very grow+past walk+ing even).

(Arda grew up a lot, he is even walking.)

The results show that the types of additive connectives are similar to younger age group data taken from CHILDES as the children between ages 2;0 and 4;8 also used *da* most frequently, then *sonra*, and then *bir de*. In Table 4 additive connective use of age group 4;6-5;0 has been shown; in Table 5 additives used by participants in age group 5;0-5;6 are illustrated:

Table 5

*The Results of Additive Connectives Used by Age Group 5;0-5;6*

	AGE GROUP 5;0-5;6		N:8
Additives	Total Frequency	Average	%

da	78	9,75	55,31
sonra	36	4,50	25,53
ve	14	1,75	9,92
bir de	5	0,62	3,54
ve de	5	0,62	3,54
ile	2	0,25	1,41
Tot. Freq.	141	17,62	

In Table 5, the additive connective uses of age group 5;0-5;6 is given, 6 different types of additives were used 141 times in total, average frequency was 17,62. Similar to previous groups; *da* is the most frequently used connective again, which is used 78 times which constitutes 55,31% of all the connectives in the group, then *sonra* follows it. *Sonra* was used 36 times constituting 25,53 % of all the additives. The third most frequent additive was not *bir de* in this group, instead, *ve* was used 14 times constituting 9,92 % of all the additive connectives. In this group *ve de* (emphatic form of *ve*) (Göksel and Kerslake, 2004) has been used 5 times and it was the only use of it in whole data collected from preschool Turkish children. One of the examples is below:

Trenden kaçan çocuk **ve de** maymun.

(Train+ablative run away+child Adjpart and monkey)

The child who ran away from the rain and the monkey.

In this group, 10 types of connectives were never used by the children, those additive connectives are *bile*, *üstüne üstlük*, *ek olarak*, *ayrıca*, *kaldı ki*, *hem*, *hem de*, *hatta*, *-ip* affix and *-arak* affix. The number of connective types and average frequency of additives used by children decreased at that age, this result shows parallelism with the study of Gökmen (2007) that the number of connectives used by 5 year-old students decreases as at that age the number of adjectives they use increase. As language is a whole, dynamic construct while one side shows development the other side may be neglected. In Table 6 results of 5;6-6;0 years old children's use of additive connectives are shown in terms of frequency and percentage:

Table 6

The Results of Additive Connectives Used by Age Group 5;6-6;0

AGE GROUP 5:6-6:0			
N:5			
Additives	Total Frequency	Average	%
da	50	10	52,08
sonra	25	5	26,04
ve	16	3,2	16,66
bir de	5	1	5,2
Tot. Freq.	96	19,2	

In Table 6 the children's who are at the ages between 5;6 and 6;0 use of additive connectives are displayed in detail. Similar to previous age groups, again *da* and *sonra* were the most frequently used additives at this group, as it was the same in the previous group *ve* was the third additive which is most frequently used by this age group. *da* was used 50 times and it constitutes 52,08% of all the connectives used by this group. *Sonra* was used 25 times, 26,04% of all the additive connectives in this group. Besides, *ve* was used 16 times, 16,66%

of all the additives. In this group only 4 types of additives were used, that the number of types decreased considerably. However, the average frequency of the additives slightly increased from 17,52 to 19,20. The reason again may be as Gökmen (2007) stated that as the children show improvement in other aspects of language use, a decrease or stabilization can be observed in the use of connectives. In this group, in addition to *da*, *sonra* and *ve*, *bir de* is the other additive used by Turkish children at the ages between 5;6 and 6;0. In Table 7 general results were displayed in detail:

Table 7  
*Overall Frequency and Percentages of Additive Connectives*

Additives	AGE GROUPS		
	4:6-5:0	5:0-5:6	5:6-6:0
da	64	78	50
sonra	41	36	25
ve	9	14	16
bir de	23	5	5
ile	4	2	0
ve de	0	5	0
bile	1	0	0
(-)arak	1	1	0
hem de	4	1	0
Tot, Freq.	147	141	96
Average	21	17,62	19,2
%	38,28	36,71	25

In Table 7 overall results of additives used between the ages 4;6 and 6;0 have been shown. A decrease is observed when the frequencies are examined after the first stage. In the first stage 9 additive types were used 147 times with average frequency of 21, and this group used 38,28% of all the additives used by children. The most productively used additives were respectively *da*, *sonra*, and *bir de*. In the second group 8 different types of additive connectives were used 141 times with average frequency of 17,62; and it was 36,7% of all the connectives. Similarly, *da* and *sonra* were most frequently used additives; however, in this stage the use of *ve* also increased, and used more than *bir de* compared to first age group. In the last group, 8 types of additives were used 96 times with average frequency of 19,2 and it was 25% of all the connectives. Again, *da*, *sonra* and *ve* were used most frequently compared to other additives. There is a decrease in use of additive connectives after first stage, then there is a slight increase again; but it can be accepted as a stabilization. In all the 384 additive connectives, *da* is used 192 times and it means 50% of all the additives were *da*. *Sonra* follows it with frequency of 102 which constitutes 26,56% of all the additives. And the third is *ve* which was 39 times, 10,15%. *Bile* and *-arak* subordination were least used connectives which were used only one time. There were two affixes identified by Göksel and Kerslake (2004) to make additive relations *-ip* and *-arak*; *-ip* was not used by the children in this study, and *-arak* was used only one time. The results are parallel with previous study (Slobin and Aksu-Koç, 1985) that children firstly use juxtaposition, then single connectives without subordination, and lastly with subordination.

In addition to additives listed by Göksel and Kerslake (2004), there were some modifications made by children while coordinating linguistic units. As it is presented, *sonra*

is the additive which was the second most frequently used after *dA*. In the collected data, it was found that children generally tend to use this connective in the form of “*ondan sonra*” as it is seen in the example:

Boyama **ondan sonra** kağıt kesme.  
(Color+Ger and then paper cut+Ger).  
Colouring, and cutting paper.

This form is also used for temporal relations; however, in the data it is seen that children use the same form for both semantic relations, additive and temporal. The reason for frequent use of *sonra* may be that it is a productive connective; as a result, the children prefer using it in different context when they learn it. Because it is easier to use the connective they know instead of the ones they are not familiar with yet.

Another means to make coordination that was not in the list of Göksel and Kerslake (2004) was that children utilize the linguistic item *başka* while adding new information. It was used in similar way to *ve*, *sonra*, *bir de*. It was observed that *başka* was generally preferred when children were thinking about the things they would add. An example is below:

**Başka**, televizyon izliyorum yapbozu bitirince.  
(Else, television watch+PROGRESSIVE+1stSin puzzle+ACCfinish+Ad.affix)  
And I watch TV after I finish the puzzle.

As it is seen in the example, the children used *başka* productively sometimes as a single word coordination device, sometimes along with *dA*. And *başka* is not the only divergence from the list; *ondan sonra* is also used by children as an additive connective. These were the coordination tools produced by children creatively; however, one of the participants (Part. 16) used an adversative connective “*ama*” (*but*) as an additive connective in their speech. One of the examples for adversative “*ama*” in the place of additive connectives is shown below:

Osman da var **ama** kardeşleri de var.  
(Osman too there is **but** siblings too there is.)  
There is Osman, too; **but** his siblings.

As it is seen in the example *ama* is used here to make an addition; however, the child preferred using the adversative *ama* instead of an additive connective such as *ve*, *bir de*, *hem de*.

In this study, the acquisition of additive connectives by Turkish children between the ages of 2;0 and 6;0 was investigated and the purpose was to find out which additive connectives Turkish children use earliest, which are used most frequently, which are used least frequently, whether the variety of additives increase or not, and lastly whether there are divergences in the use of additives compared to list given by Göksel and Kerslake (2004).

The results show that Turkish children rely on juxtaposition heavily to coordinate phrases or sentences in all stages as Turkish does not require an explicit connective to make coordination. The same results were indicated by Ma Siu (2006) who conducted a study in Cantonese that children do not need to use connectives for coordination, instead, they simply juxtapose. As Kornfilt (1997) and Göksel and Kerslake (2004) stated in Turkish juxtaposition is one of the most frequent ways of coordination. Along with coordination, at the age of 2;0 Turkish children begin using additive coordination, the first additives used by Turkish children are *dA*, *bir de*, *ve* and *ile*; *dA* is most frequently used connective in all groups and it is among the connectives which are acquired earliest. However, at first children do not use *sonra* for additive relations though it is the second most frequently used additive connective in total. The reason may be that as Bloom et. al. (1979) suggested firstly additives, then temporal connectives are acquired by children. As *sonra* is normally a temporal connective, acquisition or use of it to make coordination may not be observed at the beginning.

*dA*, *bir de*, *ve* and *ile* were found to be the first additive connectives used by Turkish children. The second aim of the study was to find most frequently used connectives, the results show that Turkish children use *dA* most frequently in all of the stages and age groups. The study of Özbek et al. (2014) supports this result that *dA* is used productively with several word classes, which makes it used frequently by Turkish children. Following *dA*, *sonra* is the second additive connective most frequently used by children. And *ve* is third most frequently used additive connective used by Turkish children. The results are not in line with previous studies (Clancy et al., 1976; Peterson and McCabe, 1987, Bloom et al., 1979) claiming that *and* (*ve*) is the most productively used additive connective. *Ve* is the third most frequently used additive connective in this study. However, the results are in line with Ma Siu (2006) and Su (1999) who also asserted that *and* is not the connective which is used most frequently used in Cantonese and Mandarin respectively.

Third question was exploring the least frequently used additive connectives by Turkish children between the ages 2;0 and 6;0. The results indicate that among the total 16 additive connectives 7 of them were never used by the children in the study; they are *hem*, *ek olarak*, *üstüne üstlük*, *ayrıca*, *kaldı ki*, *hatta*, and *-ip* affix. In addition, *bile* and *-arak* affix were used only one time in all 384 additive connective use. It is observed that generally they consist of two words; this may be a reason for children's late acquisition of them. Similarly, the reason for frequent use of *dA* and *ve* can also be the same as they are quite short and easy to pronounce.

The fourth question was seeking answer for the question that whether the number of additive connective types increase by age or not. According to results, at the beginning an increase is observed; however, then the number of connective types decreases. Gökmen (2007) stated that at the age of 5 the number of connectives used by children decreases and the number of adjectives increases. The same may be the reason in this study, too. There may be a decrease in connective use; nevertheless, there can be a development in another linguistic competency. Another reason for the decrease in connective types may be that children may get used to using some certain connectives and prefer using them.

The last question in this study was investigating the divergent uses of additive connectives that was not included in the list created by Göksel and Kerslake (2004). According to study results, in addition to the connectives listed, the children tend to use *ondan sonra* and *başka* to make coordination. Besides, one of the participants used adversative *ama* for additive purposes many times. However, it is normally not used for that purpose. The reason may be for this use that the child was learning the adversative connective *ama* at that time, as a result, they could not master its use properly in their speech yet.

### Conclusion

In this study the acquisition of additive connectives by Turkish children has been investigated. The results show that Turkish children depend heavily on juxtaposition to coordinate linguistic units as Turkish does not require explicit connectives to make relations between units. Firstly, children simply sequence the phrases or sentences; then they learn using connectives. The emergence of additive connectives starts with *ve*, *de*, *ile* and *bir de*; then the number of additive types increases.

The most frequently used additives are respectively *dA*, *sonra*, *ve* and *bir de*. The results show that *ve* is not the most frequently used additive in Turkish, that contradicts with previous studies. However, the productiveness of the *dA* is parallel with previous research. The number of connective types used by Turkish children firstly showed an increase and then a decrease among age groups. This may indicate that firstly they started to learn new connectives; used, tried them, and then stabilized. Later, they got used to some of them and started to rely on some certain ones.

Finally, Turkish children used some different ways of addition apart from the ones listed in Göksel and Kerslake (2004) that *ondan sonra* and *başka* were used by them to make coordination relations. However, one of the participants misused adversative *ama* by using it as an additive to coordinate phrases and sentences with this connective.

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