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A PSYCHOLINGUISTIC STUDY ON THE COMPREHENSION OF PASSIVE VOICE BY CHILDREN NATIVE SPEAKERS OF JORDANIAN ARABIC

Hanan Zaki Alsadi

Community College of Qatar

ABSTRACT: *This study aims at examining the influence of age and gender factors on the Jordanian children's comprehension of passive voice. Thirty children who belong to five age group from 3; 0 – 7; 11 years old participated in this study. Each of these groups include six children with equal number of males and females chosen randomly from an elementary school in Jordan. A comprehension test was given to children using six pairs of pictures that illustrate the contrast between the active and passive sentences. The findings indicate the Jordanian children exhibit an awareness of passive construction at an early age; at around three years of age. The gender variable was found statistically insignificant in the comprehension of passive voice.*

KEYWORDS: Passive, Jordanian, Arabic, Age, Comprehension

INTRODUCTION

The passive construction can be employed to express certain pragmatic meaning which is to convey the importance of a patient over an agent (Maldonado, 2007). Speakers switch to passive construction when they prefer to leave the identity of the agent vague by reducing the assertion of responsibility on the agent part (Van Oosten ,1985).

Passive sentences have been a subject of much research because of the complexity of such syntactic structure. Bridges et al (1981) indicate that tests of children's comprehension of syntax have largely been constructed on the basis of the comprehension of contrasts between grammatical constructions such as between active and passive sentences. Chomsky (1957) states that passive sentences involve complex transformations that children have difficulty with. He claims that the more transformations that occur in a given sentence, the harder that sentence is to comprehend. For example, non-reversible sentences are easier to comprehend compared to reversible sentences. James (1996) explains that to understand a reversible active sentences in English, a child needs to be aware that the first noun in the sentence is the agent of the action whereas the second noun is the recipient of the action. In contrast, a child must have some knowledge of the syntactic rules in order to comprehend the passive reversible sentences because in a passive sentence, the first noun is not the agent but it is the object of the action. Similarly, Hayhurst (1967) suggests that the agentless passive is supposed to be simpler than the reversible and non - reversible passive because of the omission of the actor in such category of passive.

In standard Arabic, passive voice is formed by changing the vowelling of the active verb. Haywood and Nahmad (1962) demonstrate that when it is desired to draw the reader's attention to the fact that a verb is passive, the placing of Dumma /u/ over the first syllable is usually considered sufficient to indicate this. However, after the initial Damma / u/, kasra / i / follows the perfect and fatHa /a / in the imperfect. For example, the passive form of kataba (he wrote) is kutiba (it was written); whereas the passive form of yaktubu (he writes) is yuktabu (it is

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written). In contrast, the passive construction has various forms in spoken Arabic. Erwin (1969) studies Iraqi Arabic and states that most transitive verbs have associated forms known as passive participles. He says that these forms function as adjectives and indicate a state or condition resulting from having undergone the action named by the verb. Being adjectives, passive participles are inflected for gender and number. For example, from the verb katab (to write), the masculine participle passive is maktuub, the feminine participle passive is maktuuba, the plural masculine form is maktuubiin, the plural feminine from is maktuubat. Alsadi (2017) demonstrates that the passive participle patterns in Jordanian Arabic can be classified into six forms which are **mfa99al**, **maf9i**, **maf9uul**, **itfa99al**, **infa9al** and **mfa99a** such as in **msakkar, makwi, madhuun, itshaGal, inkasar, mramma** respectively. Wise (1975) states that the surface structure in active sentences and that of their corresponding passives in Egyptian Arabic exhibit that the subject or agent of the active is always unexpressed in the passive, the object of the active sentence must be identified with the subject of the passive and the passive form of the verb is equivalent to the active preceded by the prefix "it — or "in — such as itfataH and inkasar.

REVIEW OF RELATED LITERATURE

Suzuki (2002) investigated the Japanese children's difficulties in the interpretation and comprehension of passive. Thirty six Japanese preschool children participated in act-out sentence comprehension tasks. They were asked to manipulate two types of stimulus sentences: Type (I) had the child's toy , whose reference involved the child's actual name (e.g. "Jun's cat"), encoded as grammatical subject, while Type (2) had the child's toy encoded as non—subject. The results show that children's performance on passives was significantly better in Type (1) than in Type (2). Suzuki (2002) claimed that the children's better performance on Type (1) passive is a result of being free from shifting perspective.

Maratsos et al (1979) tested 38 children whose ages ranged from 4 to 5 years on their ability to understand English passives for actional verbs (such as hold, wash, shake) and non - actional verbs (such as remember, forget, know, like, miss). The children were presented with finger puppets and told something about them using either an active or passive sentence They were then asked "Who did it ?" , which is an appropriate question for actional verbs, but not for non-actional ones .The significant difference in their performance for each kind suggests that passives were easier with actional verbs than non- actional ones. This finding was confirmed in a later study by Maratsos et al (1985),who tested the comprehension of passivized mental state verbs (e. g. know, see) in comparison with the understanding of passivized physical action verbs (e. g. find, shake). They found that children up to 7 years old clearly understand passivized action verbs better than passivized mental state verbs. This finding constitute the basis for the assumption that prototypical transitivity plays a part in passive acquisition.

Sinclair and Ferriero (1970) studied the comprehension of passive and active sentences in French – speaking Genevan children aged 4; 2 to 7; 8 years. The children were asked to act out reversible and non – reversible active and passive sentences using five French verbs which were to break, to spill, to wash, to push and to follow. They found out that the reversible sentences were more difficult to comprehend than non – reversible sentences and the agentless passive was easier to comprehend than full passive.

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Hakuta (1977) investigated the comprehension of active and passive sentences in 48 Japanese – speaking children aged 2;3 to 6;2 years. The children in this study were required to act out 12 different reversible active and passive sentences. The findings of this study revealed that it is not until age 5.1 years that children comprehended reversibile passive sentences correctly.

Borer and Wexier (1987) explained the relatively late acquisition of passive construction by proposing the Maturation Hypothesis which states that the biological maturation determines the grammatical principles available to the child. They claimed that the timing and nature of acquisition depend primarily on the maturation of grammatical principles rather than on the frequency of exposure to the constructions. Furthermore, they demonstrated that the grammatical principles are not available at certain stages of a chi1ds development, and they are available at a later stage. They hypothesized that the grammatical principles are not learned. In fact, the Maturation Hypothesis is in contradiction with the Continuity Hypothesis, suggested by Pinker (1984), that the latter argues that the grammatical principles are available from the beginning of the acquisition process and that learning then takes place gradually over time. It states that the principles that the child uses to fix her/his grammar are constant over the course of development of the child.

Objectives and Significance of the Study

This study aims at investigating the comprehension of passive voice by children native speakers of Jordanian Arabic. It is concerned with finding out to what extent Jordanian children correctly comprehend the passive voice in Jordanian Arabic. This study addresses the following questions:

1. Is there a statistically significant difference (a < .05) in the comprehension of passive voice in children native speakers of Jordanian Arabic due to the age variable?

2. Is there a statistically significant difference (a <.05) in the comprehension of passive voice in children native speakers of Jordanian Arabic due to the gender variable?

METHODOLOGY

It is a requirement of conducting any developmental study to have data that are comparable over large spans of cognitive and communicative development. In fact, the current study is based on a comprehension test comprising six pairs of pictures showing the contrast between the active and passive sentences .Only culturally familiar forms of passive in Jordanian Arabic were used.

Sample of the study

The sample of this study consists of forty Jordanian children who belong to five age groups. Each group includes eight children (four girls and four boys) chosen randomly from a primary school in Jordan.

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Age Group	Age (years)	Mean Age
Group 1	3;0 – 3; 11	3;3
Group 2	4;0 – 4;11	4;4
Group 3	5;0 – 5; 11	5;4
Group 4	6;0 – 6; 11	6;4
Group 5	7;0 – 7; 11	7;3

Data Collection and procedures

Children were visited and individually tested. The visits and sessions were divided and carried out as follows:

1. The first session was just for spontaneous speech, i.e. a sort of orientation session. The investigator talked with the children spontaneously using Jordanian Arabic about whatever they had in the room and about their own life before starting the test in an attempt to warm up and get the children more familiar with the researcher.

2. The second session started with ten minutes of spontaneous speech; then with comprehension test. Six pairs of pictures that show the difference between the active and passive sentences were used. The researcher used the six forms of passive voice in Jordanian Arabic illustrated in Alsadi (2017) namely; **mfa99al, maf9i, maf9uul, ifa99al, infa9al, mfa99a**.These forms were likely to be elicited by the pictures presented for the children. There was a situation of choice between pictures representing the active and passive. The standard question asked for the comprehension testing was: Which picture shows "……" point to it! The answer was given by pointing to the right picture. For example, which picture shows "a painted wall?" Point to it! (A pair of pictures was presented, one of a painted wall (Heit madhuun) and the other of a boy who is painting the wall).

Statistical Data Analysis:

The researcher used the mean and standard deviation to statistically analyze the effect of age on the comprehension of passive voice in Jordanian Arabic. ANOVA-Test (analysis of variance) was carried out to find out whether there are statistically significant differences in the comprehension of the forms of passive due to age variable. Post Hoc Test using LSD (Least Significant Difference) was used to find out a pair wise comparison between age groups. Also, T-Test was carried out to find the effect of the gender variable on the comprehension of passive voice.

FINDINGS AND DISCUSSION

In order to examine the effect of the age on the comprehension of passive, the researcher applied a statistical analysis comprises the mean and the standard deviation. The results are shown in Table (1).

Table (1) Performance of the Children on the Comprehension Test

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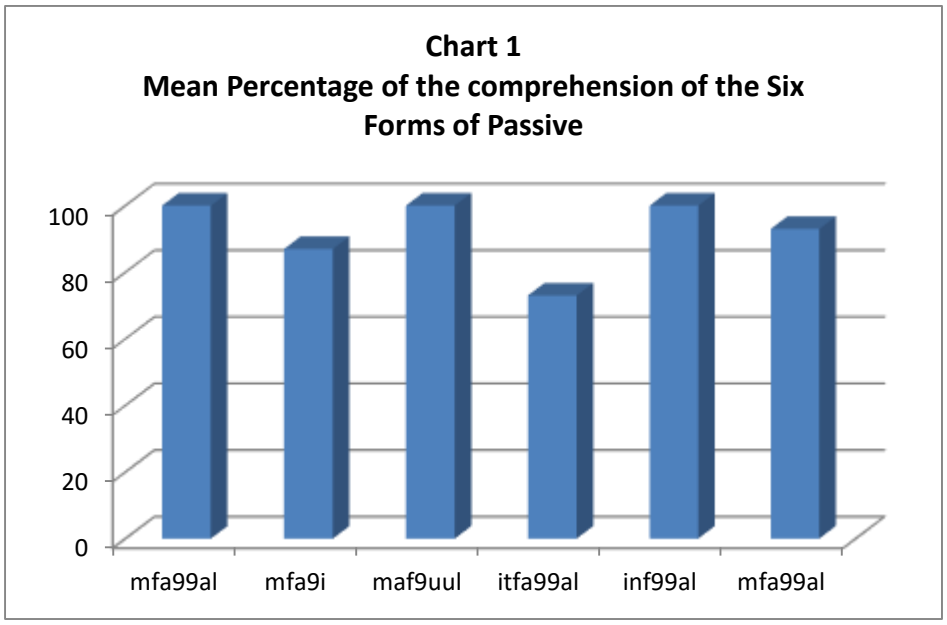
	Group 1		Group 1		Group 1		Group 1		Group 1		Total	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
mfa99al	1.00	.00	1.00	.00	1.00	.00	1.00	.00	1.00	.00	1.00	.00
maf9i	.33	.52	1.00	.00	1.00	.00	1.00	.00	1.00	.00	.87	.35
maf9uul	1.00	.00	1.00	.00	1.00	.00	1.00	.00	1.00	.00	1.00	.00
itfa99al	.17	.41	.67	.52	.83	.41	1.00	.00	1.00	.00	.73	.45
infa9al	1.00	.00	1.00	.00	1.00	.00	1.00	.00	1.00	.00	1.00	.00
mfa99a	.83	.41	.83	.41	.100	.00	1.00	.00	1.00	.00	.93	.25

The data in Table (1) show that 100% of the children in all age groups were able to comprehend the form **mfa99al** مفعّل whereas 87% of the children were able to comprehend the form **maf9i** مفعِي and 100% of the children were able to comprehend the form **maf9uul** مفعول. Seventy three percent of the children in all age groups were able to comprehend the form **itfa99al** اتفعّل. Also, 100% of the children were able to comprehend the form **inf9al** انفعل; whereas 93% of the children were able to comprehend the form **mfa99a** مفعّى **.** Thus, the mean percentages that were achieved by the children on the comprehension test were relatively high and that obviously appears in Chart (1).



The data of the comprehension test show that the children of different ages are able to comprehend the passive constructions. The researcher carried out a statistical analysis (ANOVA) to have an idea about the differences of the comprehension of passive construction with regard to the age of the subjects as shown in Table (2).

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Table (2) Results of the Anova – Test demonstrating the statistical differences in the comprehension of the forms of passive due to the age variable

		Sum of Squares	df	Mean square	F	Sig.
Mfa99al	Between Groups	.000	4	.000	.	.
	Within Groups	.000	25	.000		
	Total	.000	29			
Maf9i	Between Groups	2.133	4	.533	10.000	.000
	Within Groups	1.333	25	.053		
	Total	3.467	29			
Maf9uul	Between Groups	.000	4	.000	.	.
	Within Groups	.000	25	.000		
	Total	.000	29			
Itfa99al	Between Groups	2.867	4	.717	5.972	.002
	Within Groups	3.000	25	.120		
	Total	5.867	29			
Infa9al	Between Groups	.000	4	.000	.	.
	Within Groups	.000	25	.000		
	Total	.000	29			
mfa99a	Between Groups	.200	4	.050	.750	.567
	Within Groups	1.667	25	.067		
	Total	1.867	29			

The data shown in Table (2) reveal that there were statistically significant differences in the comprehension of passive due to the age variable in the forms **maf9i** مَفْعِي and **itfa99al** اتفعّل reflecting the fact that the older groups performed better than the younger age groups. The data show that the children's performance on the comprehension of passive became better with age. The comprehension of these forms was improved from one age group to another. To find out a pair wise comparison between age groups with regard to the form **maf9i** مَفْعِي and **itfa99al** اتفعّل, the Post Hoc Test using LSD (Least significant differences) was used as shown in Tables (3) and (4).

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Table (3) Results of Post Hoc Test (Multiple Comparison) for the comprehension of (maf9i) form

Dependent variable	(1)Age	(J) Age	Mean Difference	Sig.
maf9i	1	2 3 4 5	-.67(*) -.67(*) -.67(*) -.67(*)	.000 .000 .000 .000
	2	1 3 4 5	.67(*) .00 00 00	.000 1.000 1.000 1.000 .000
	3	1 2 4 5	.67(*) 00 00 00	.000 1.000 1.000 1.000
	4	1 2 3 5	.67(*) 00 00 00	.000 1.000 1.000 1.000
	5	1 2 3 4	.67(*) 00 00 00	.000 1.000 1.000 1.000

Table (4) Results of Post Hoc Test (Multiple Comparison) for the comprehension of (itfa99al) form

Dependent variable	(1)Age	(J) Age	Mean Difference (1-J)	Sig.
Itfa99al	1	2 3 4 5	-.50(*) -.67(*) -.83(*) -.83(*)	.019 .003 .000 .000
	2	1 3 4 5	.50(*) -.17 -.33 -.33	.019 .413 .108 .108
	3	1 2 4 5	.67(*) .17 -.17 -.17	.003 .413 .413 .413

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	4	1 2 3 5	.83(*) .33 .17 .00	.000 .108 .413 1.000
	5	1 2 3 4	.83(*) .33 .17 .00	.000 .108 .413 1.000

Such data indicate that the development of the form **maf9i** was statistically significant in the second age group whose ages range from 4; 0 to 4; I1 years. Similarly, the development of the form **itfa99al** was also statistically significant in the second age group.

In fact, a statistical analysis (T-Test) was carried out to examine the effect of the gender variable on the comprehension of passive as shown in Table (5).

Table (5) the effect of the gender variable on the comprehension of passive as shown in Table

	gender	N	Mean	Std Deviation	t	Sig.(2-tailed)
mfa99al	1	15	1.00	.000(a)		
	2	15	1.00	.000(a)		
maf9i	1	15	.87	.352	.000	1.000
	2	15	.87	.352		
maf9uul	1	15	1.00	.000(a)		
	2	15	1.00	.000(a)		
itfa99al	1	15	.73	.458	.000	1.000
	2	15	.73	.458		
infa9al	1	15	1.00	.000(a)		
	2	15	1.00	.000(a)		
mfa99a	1	15	.93	.258	.000	1.000
	2	15	.93	.258		

The data in table (5) show that there are no statistically significant differences in the comprehension of passive due to the gender variable since most of the mean percentages of the comprehension test were equal for both males and females.

The development of comprehension of language is as interesting as the development of production which has received more attention. According to Dale (1976), children do seem to comprehend speech somewhat before they produce any true language. The results of the comprehension test in this study seem to be consistent with such a conclusion. The mean percentages of the six forms which were recorded for children's performance on the comprehension test were clearly high. The Jordanian children are able to comprehend passive

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construction in Jordanian Arabic at early age, around the age of three. Maratsos et al (1985) and Horgan (1978) proposed that the passive construction may be comprehended before the evidence of use. They claimed that children may exhibit an awareness of passive construction at an early age despite its complexity and infrequency. Nevertheless, the fact that children are able to comprehend passive construction in Jordanian Arabic at early age apparently contradicts the study of Beilin et al (1975) who stated that children are not able to realize the synonymity of an active sentence and its passive counterpart before the age of seven. In their point of view, only when the necessary level of mental reversibility is reached at around 7 years of age, the understanding of the passive construction is acquired. Since spoken Arabic does not have such reversibility structure in its passive construction, it is logical to state that the understanding of passive construction in Arabic is acquired at a younger age, namely the age of 3 years, as the present study showed.

In fact, pragmatic factors cannot be excluded from what is considered to be syntactic processing. One pragmatic factor that can affect the extent to which a certain structure of a sentence can be comprehended is the plausibility of the sentence. Taylor (1990) stated that "a plausible sentence depicts a highly likely event in which the agent and the patient play typical roles for a given action or verb, for example, "The mother feeds her baby milk". The implausible sentence depicts a highly unlikely event such as "The baby feeds its mother milk"." (p.184).

According to Taylor, the plausible sentence can be comprehended by merely processing the content such as "mother" "baby" "milk" which are related using knowledge of the world with little syntactic analysis and thus such sentences are easier to comprehend. By contrast, an implausible sentence needs to be syntactically analyzed which is more difficult and complicated. By applying the plausibility factor on the comprehension of passive sentences of spoken Arabic, it can be suggested that the passive sentences in spoken Arabic are plausible in the sense that they require only syntactic corroboration of what has already been understood from semantic- pragmatic contents, On the other hand, Taylor (1990) suggested that the reversible passive is more difficult to understand than the non-reversible passive since the reversible passive sentences are considered implausible. In a review of the syntactic structure of the passive sentences in spoken Arabic, it can be observed that the subject or agent of the active is always unexpressed in the passive and thus the reversibility structure does not occur in the construction of passive sentences in spoken Arabic which makes them easier for the Jordanian children to comprehend.

Regarding the effect of the gender variable on the children's comprehension of passive sentences, the data in Table (5) show that the gender variable is statistically insignificant. This result is in accordance with most studies that have been conducted on language development (Cherry 1975, Macaulay 1978, Smith and Connolly 1972) in which no sex-related differences have been found in either rate or route of development. Furthermore, Templin (1957) suggested that eventually both sexes have obtained the same level of care and training which causes the language differences between boys and girls to be less pronounced over years.

CONCLUSION

In the light of the findings of the study, it can be concluded that the differences in the comprehension of passive construction in the different age groups turned out to be statistically

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significant with regard to the age variable in the comprehension of the forms maf9i and itfa99al. That is the significant development of these forms occurred with four -year – old children who were included in the second age group in this study. Therefore, such findings lead us to conclude that the nature of the construction of passive in Jordanian Arabic does not have that complexity which may pose difficulties for the Jordanian children in their comprehension of passive voice as with some other languages which have a complex passive voice structure. The gender variable was found statistically insignificant in the comprehension of passive voice.

Future Research

The present study sheds light on the comprehension of passive voice by Jordanian Children. Nevertheless, the door remains wide open for further research on the acquisition of passive. The comprehension of passive voice of the children who are mentally retarded can be studied to find out the differences between their comprehension of passive voice and those of normal children. Such studies would be helpful for medical doctors and therapists who work with such children because the findings of such studies may provide them with information about where their patients are on the way to recovery.

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