



## The Comprehension of Verbal Passives in Najdi Arabic

Bayan Albedaiwi

Department of English Language and Translation, College of Arabic Language and Social Studies, Qassim University, Saudi Arabia

### ABSTRACT

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The acquisition of passive constructions has been the focus of considerable theoretical and empirical interest. Passive constructions are often considered late-acquired structures, not fully acquired for at least six years. This longitudinal study provides evidence that passive sentences emerge early in Najdi Arabic, around the age of three. It argues that the acquisition of passives is readily observed when the language lacks the morphological ambiguity of passives and accurate measures are used in the test administration. This paper concludes that theories of passive acquisition must account for these issues.

### Keywords:

passives, longitudinal study, acquisition, Najdi Arabic

### 1. INTRODUCTION

Children's acquisition of passive sentences has received considerable empirical and theoretical interest. The experimental data on passive acquisition are controversial, and there is no general agreement about the relative age of passive acquisition. Considerable evidence found that passives are acquired late (e.g., Horgan, 1978), but a few empirical data indicate that passives are acquired early (e.g., Demuth et al., 2010). Children's difficulties with passives were taken as evidence of a grammatical deficiency (e.g., Borer & Wexler, 1987). Such proposals, however, are based on English data, in which verbal and adjectival passives are structurally identical.

The surface structure of a short passive sentence, lacking the external argument, is ambiguous between verbal and adjectival readings. Verbal passive (as in 1a) represents a dynamic action and implies agency, while adjectival passive (as in 1b) represents a resultant state of that action and normally does not imply agency. The addition of a *by*-phrase, however, can disambiguate the adjectival reading and the sentence becomes unambiguously verbal.

(1) a. The pizza was eaten. (The state/event of the pizza being eaten)

b. The pizza was eaten by John. (The event of the pizza having been eaten by John)

Several researchers (e.g., Alexiadou & Ilic, 2022; Demuth et al., 2010; Grillo et al., 2018) suggested that

children's difficulties in some languages (e.g., English) may arise as a sequence of structural ambiguity rather than the process of passivization itself. This paper directly addresses this issue by examining Najdi Arabic (NA), a variety that does not have such structural ambiguity. The investigation of Arabic passives will, thus, provide an enhanced understanding of children's passive acquisition.

This paper has been organized in the following way. Section 2 presents a brief overview of passives in Najdi Arabic. Section 3 provides empirical and theoretical background of passive acquisition. Section 4 gives an overview of the methodology. Sections 5 and 6 summarize and discuss the findings of all sessions. Finally, section 7 concludes the paper.

### 2. PASSIVE STRUCTURE IN NAJDI ARABIC

NA is an Arabic dialect spoken in the Najd region of Saudi Arabia. It adopts the Semitic root-and-pattern morphology to form passive verbs. It has two distinct types of passive structures. One is verbal passive, which describes an event. The other is the adjectival passive, which describes a resultant state. The verbal passive (as in 2b) selects the passive pattern /fʕel/, whereas the adjectival passive (as in 2c) selects the pattern /ʔmfeʕal/ (Ingham, 1994; Alkhudair & Aljutaily, 2022). The two types are nonetheless morphologically and semantically different from one another.

*Corresponding Author: Bayan Albedaiwi*

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(2)

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|----|---|---------------------------|---------------------------|----------------------|
| a. | <i>fitah</i><br>opened-3SM-Active<br>'Ahmed opened the door.' | <i>Ahmed</i><br>Ahmed     | <i>el-bab</i><br>the-door | (Active)             |
| b. | <i>fteh</i><br>opened-3SM-Pass<br>'The door was opened.'      | <i>el-bab</i><br>the-door |                           | (Verbal passive)     |
| c. | <i>ʔmfetah</i><br>opened-3SM-Pass<br>'The door was opened.'   | <i>el-bab</i><br>the-door |                           | (Adjectival passive) |

### 3. BACKGROUND

#### 3.1 Previous Studies

Considerable experimental data suggest that young children have difficulty comprehending and producing passive sentences until they are well past the age of six. One of the early instances of these studies was carried out by Horgan (1978). Horgan (1978) examined the acquisition of short and long verbal passives in children acquiring English. In the picture description task, children showed significantly better performance on short passives than long passives; They showed good comprehension of short passives by the age of four (60%), but long verbal passives remained difficult until the age of six (10%). Accordingly, Horgan concluded that children's early passives are statives (or adjectival), and the complete competence of true verbal passives is not acquired before the age of six.

While Horgan's (1978) findings suggested a delayed acquisition of verbal passives, later studies revealed a more convoluted picture with a divergent acquisition age. Maratsos et al. (1985) proposed that the children's comprehension of the passives is limited to actional verbs (as in 3a). In their comprehension tasks, English-speaking children demonstrated high passive competence with actional verbs at the age of four, while nonactional passives (as in 3b) remain difficult until the age of 5–7 years. Maratsos et al. (1985) explained this discrepancy using Hopper and Thompson's (1980) hypothesis of semantic transitivity; Actional verbs are high in semantic transitivity, whereas nonactional verbs are low.

(3)

- a. Superman was held by Batman.
- b. Goofy was liked by Donald. (Adopted from Maratsos et al., 1985, p. 3)

The difficulties that children face with passive acquisition have been tested in numerous Indo-European languages (e.g., for Portuguese, Agostinho, 2020; for Catalan, Gavarró & Parramon, 2017; for Serbian, for Italian, Volpato et al., 2015). Volpato et al. (2015) assessed the acquisition of passive sentences in Italian-speaking children aged 3;4 to 6;2. They used two tasks: a sentence-picture matching task and a picture description task. Children were examined in 3 conditions: the use of the by-phrase, the verb type (actional vs. nonactional), and the kind of auxiliary (*venire* 'to come'

vs. *essere* 'to be'). The last condition assisted the investigators in determining each child's mastery of verbal passives because the auxiliary *venire* can only be used with verbal passives, whereas the auxiliary *essere* may be used with both verbal and adjectival passives. The findings revealed that Italian children were more accurate in actional and short passives containing the auxiliary *venire* than nonactional and short passives containing the auxiliary *essere*. Volpato et al. attributed the lower performance in nonactional passives to their experimental design which makes it difficult for them to represent nonactional verbs in pictures. Volpato et al., therefore, concluded that the high accuracy observed with *venire* passives provides convincing evidence that children do not lack the syntactic knowledge of passives and that the lower accuracy with *essere* passives may be due to the ambiguity of this structure.

The data from various non-Indo-European languages with unambiguous passive structures, however, contradict the aforementioned findings (e.g., for Japanese, Alexiadou & Ilic', 2022; for Jordanian Arabic, Alsadi, 2017; for Sesotho, Demuth, 1989). Over two years, Demuth (1989) examined 84 hours of spontaneous speech from 4 Sesotho-speaking children. She found that Sesotho children produce short and long verbal passive sentences before 3 years. In (2010), Demuth et al. observed that Sesotho children produce and comprehend all passive constructions, including actional and nonactional passives by the age of 3. Demuth et al., therefore, conclude that clear passive morphology and high passive frequency in Sesotho stimulate early acquisition.

As for Arabic, there have been very few empirical investigations on passive acquisition to date, and, to my knowledge, only Alsadi (2017) has investigated the production of passive sentences in children acquiring Jordanian Arabic. Alsadi (2017) used a sentence-picture matching task to examine children's production of some passive forms in the age range 3;0–7;11. Alsadi found that Jordanian Arabic children as young as three years can produce various passive forms and that some passive forms were produced higher than others (e.g., *mfaʕʕa* [only 10%] vs. *mfaʕʕal* [97%]). Accordingly, Alsadi suggested that her findings support the early acquisition of passives and attributed the frequency variations to the parental input of passive constructions in Jordanian Arabic.

## Bayan Albedaiwi, The Comprehension of Verbal Passives in Najdi Arabic

Although Alsadi (2017) provides additional experimental evidence of early passive production, her experimental methodology needs further clarifications. For example, it is not clear whether nonactional and verbal passives have been investigated in her study. Previous research has identified these types as late-developing constructions (e.g., Horgan, 1978; Maratsos et al., 1985).

### 3.2 Previous Accounts

The causes of the observed delay of passive acquisition in some languages have been the subject of intense debate within child language acquisition research. Several researchers (e.g., Borer & Wexler, 1987; Orfitelli, 2012; Snyder & Hyams, 2015) claim that children's difficulties stem from a syntactic deficiency in child language. They argue that children lack some syntactic mechanisms necessary to construct passive sentences. Other researchers assumed that children's difficulties arise as a sequence of structural ambiguity of passive sentences (e.g., Alexiadou & Ilic, 2022; Grillo et al., 2018). Finally, some authors attributed the low accuracy to the relatively low frequency of passivation in the parental input (e.g., Gordon & Chafetz, 1990).

Taken together, the relative age of passive acquisition in previous research has been subject to considerable debate, with contradictory findings leaving the major concern at hand unresolved. These inconsistent data highlight the need for more cross-linguistic studies with clear and distinctive passive morphology, such as Arabic morphology. The purpose of this longitudinal study is to contribute to the debate on the passive acquisition by providing a longitudinal analysis of the comprehension of passive sentences in NA. It investigates the developmental

trajectory of Arabic verbal passive sentences, focusing on both verb classes (actional vs. nonactional) and what factors may affect passive development.

## 4. METHODOLOGY

This study followed a longitudinal design to gain in-depth insights into children's performance and passive development. The truth-value judgment task (TVJT) was conducted to assess children's ability to comprehend passive sentences. Following Crain and Thornton's (1998) principles, each child was tested individually using a puppet to establish a game-like setting.

### 4.1 Participants

The data were collected from three native speakers of Najdi Arabic. All the participants were normally developing monolingual girls and did not have any mental, hearing, or language impairment. Their ages were 3;7, 4;0, and 5;1 at the beginning of the study. The participants were born in Buraydah, the official capital city of the Al-Qassim region, in Saudi Arabia. All children's parents obtained a consent form to comply with ethical principles.

### 4.2 Materials

A TVJT was used to investigate passive comprehension. Each session included sixteen passive and active sentences. Experimental sentences were preceded by a story that contains the target response. The verbs were divided into actional and nonactional in matched and mismatched contexts. The match contexts accurately described the scenario, whereas the mismatch contexts inaccurately described what happened. True and false targets were randomly presented, to ensure that each child comprehends the sentence. Table 1 lists all experimental conditions.

**Table 1. Experimental Conditions**

Sentence Type	Target
Passive -actional	2 Match
	2 Mismatch
Passive-nonactional	2 Match
	2 Mismatch
Active-actional	2 Match
	2 Mismatch
Active-nonactional	2 Match
	2 Mismatch

### 4.3 Procedures

The puppet and children were instructed to listen to each story. The task had two examiners: the story narrator and the one who plays the puppet's role. Children were encouraged to help the puppet speak Arabic properly. They were informed to reward the puppet if he accurately described what happened in the story or remind him if he gave an inaccurate description. Children judged the truthfulness of the statement uttered by the puppet and explained their responses.

Children's developmental stages of passive comprehension were assessed in five sessions to get more

reliable results and to follow the comprehension patterns. There was a one-month interval between sessions. The testing session lasted around 30 minutes and was audio recorded to review children's responses.

### 4.4 Data Analyses

Accuracy percentages were provided to get better insight into Arabic-speaking comprehension of active and passive constructions. Sixteen was the total score for true responses per session. The true response was given a 1 score and the false response was given a 0 score.

5. RESULTS

This longitudinal study attempted to examine early knowledge of passives in Arabic-speaking children and whether their comprehension is affected by the class of the

verb. The data were elicited from three NA girls by using TVJT over five months. Table 2 lists the percentage and the number of accurate responses in the actional and nonactional active and passive sentences on each session.

Table 2. Children’s performance across all experimental sessions

Session	Verb class	Age 5;1–5;5	Age 4;0–4;4	Age 3;7–3;11	Total %
1	Passive actional	100% (4/4)	50% (2/4)	50% (2/4)	66.6%
	Passive nonactional	100% (4/4)	50% (2/4)	50% (2/4)	
2	Passive actional	100% (4/4)	75% (3/4)	50% (2/4)	75%
	Passive nonactional	100% (4/4)	75% (3/4)	50% (2/4)	
3	Passive actional	100% (4/4)	75% (3/4)	75% (3/4)	83.3%
	Passive nonactional	100% (4/4)	75% (3/4)	75% (3/4)	
4	Passive actional	100% (4/4)	100% (4/4)	100% (4/4)	100%
	Passive nonactional	100% (4/4)	100% (4/4)	100% (4/4)	
5	Passive actional	100% (4/4)	100% (4/4)	100% (4/4)	100%
	Passive nonactional	100% (4/4)	100% (4/4)	100% (4/4)	
1–5	Active actional	100% (20/20)	100% (20/20)	100% (20/20)	100%
	Active nonactional	100% (20/20)	100% (20/20)	100% (20/20)	

Considering the performance of all children, all NA children showed adult-like accuracy (100%) on all active trials throughout all experimental sessions. Only a 5-year-old child, however, performed at ceiling levels (100%) on all experimental conditions in each session. The percentage of correct responses in the first session for 3- and 4-year-olds was low (only 50%). However, by sessions 2 and 3, the percentage of correct responses has increased to 75% for the 4-year-old child, while the 3-year-old child remained at chance (50%) in the second session and showed above-chance accuracy (75%) in the third session. Surprisingly, the performance of 3- and 4-year-olds has improved dramatically in the last two sessions, reaching 100%.

6. DISCUSSION

This longitudinal study examined the developmental trajectory of Arabic passives without structural ambiguity that would interfere with the main concern. Over the period of five months, three native speakers of NA children were assessed in their comprehension of actional and nonactional passive sentences using TVJT.

One unanticipated finding that emerged in this study was early passive comprehension. Overall, NA children were highly accurate in comprehending the passive sentences, obtaining an average score of 85% on all the experimental sessions combined. The high level of accuracy would be unexpected if morphosyntactic knowledge of passives is not present in the child’s language before the age of six. The adult-like passive comprehension (100%) of all NA children in the last two sessions proved that NA children master all passive constructions at an early age, starting around the age of three.

The early passive acquisition observed in this study could be attributed to the root-and-pattern passive morphology in Arabic. It seems possible that the clear and

distinct morphological characteristics of passive sentences in NA realized in forms /fʕel/ and /ʔmfeʕal/ aid early passive comprehension. This reason confirms earlier observations, which showed that children’s difficulties in some languages (e.g., English) stem from the ambiguity of passive forms (e.g., Alexiadou & Ilic, 2022; Grillo et al., 2018).

This finding mirrors those of the previous studies that have found early passive mastery (e.g., Alsadi, 2017; Demuth et al., 2010). It, however, challenges previous accounts which claim that children’s syntactic knowledge is deficient and passive constructions are not fully acquired before the age of six (e.g., Borer & Wexler, 1987; Orfitelli, 2012; Snyder & Hyams, 2015).

Another intriguing conclusion from this longitudinal study concerns the acquisition of actional and nonactional passives. While previous investigations have found that actional passives are acquired earlier than nonactional passives (e.g., Maratsos et al., 1985; Volpato et al., 2015), this study found no experimental evidence to support this asymmetry. This finding, however, is consistent with previous studies that have found no significant effect of the verb type on children’s acquisition (e.g., Demuth et al., 2010; O’Brien et al., 2006). The methodological approach employed in this study (TVJT) is one explanation for this finding. Using TVJT to act nonactional verbs (e.g., see) is easier than other methodological techniques such as picture-sentence matching tasks.

As for the acquisition of passives relative to the actives, this study replicated previous findings that active constructions are acquired earlier than passives (e.g., Baldie, 1976; Maratsos et al., 1985). This asymmetry was observed amongst all participants and conditions.

### 7. CONCLUSION

This longitudinal study contributes to the debate on passive acquisition by examining the comprehension of unambiguously verbal passive sentences in 3- to 5-year-old NA children. It investigates whether the previously observed delay of passive acquisition holds in NA and what factors may affect children's acquisition. To this end, three native speakers of NA children were examined over five months on their comprehension of passive constructions using the TVJT.

The findings revealed that passive sentences are acquired early in NA, emerging around three years. The high accuracy rate of NA children provides evidence that they have the morphosyntactic competence of passive constructions from early ages and that their knowledge is not constrained by the verb type (i.e., actional vs. nonactional). The fact that all children tested reached the ceiling level (100%) in the last sessions contributes significantly to strengthening this conclusion.

Although this work is based on a small sample of participants, it has several important contributions to experimental and theoretical investigations on passive acquisition. First, this work is one of the very few studies that investigate passive acquisition in Arabic. Second, it provides additional insight into passive comprehension cross-linguistically as it argues that clear passive morphology aids in early passive acquisition; that is, the absence of structural ambiguity in passive sentences creates an ideal environment for early passive acquisition. Third, it challenges theoretical arguments which claim that children lack passive competence (e.g., Borer & Wexler, 1987; Orfitelli, 2012; Snyder & Hyams, 2015); It claims instead that children's difficulties in other languages may stem from the experimental method and the structural ambiguity of passive structures.

### 8. DISCLOSURE

The author has no competing interests to declare.

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## Bayan Albedaiwi, The Comprehension of Verbal Passives in Najdi Arabic

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