

Dissertation Proposal for the Doctor of Philosophy

Dissertation Topic:

Identifying risk factors for language development among Palestinian Arabic (PA) speaking children ages 18-36 months, using PA-CDI.

זיהוי סמנים לסיכון בהתפתחות שפתית בקרב ילדים דוברי ערבית פלסטינאית בגילאי 18-36 נ חודשים, ע"י שימוש בשאלון הורים

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(1) Introduction of Research Goals

Language acquisition has always fascinated philosophers and language researchers; how a child acquires the ability to produce and comprehend a language with its morphology, syntax, semantics, phonology and vocabulary has been of great particular interest and has been studied widely and in many languages. However, little is known about the course of this acquisition in Palestinian Arabic (PA) as it has not been studied sufficiently. Even less is known about Developmental Language Disorder (DLD) amongst PA speakers. The main aim of the present study is to study language acquisition in PA and to identify risk factors for language development among Palestinian Arabic (PA) speaking children ages 18-36 months. This will be conducted using a parental questionnaire. The MacArthur Bates Communicative Development Inventory (MCDI, 1994) is a parental questionnaire which taps into parents' knowledge of their children's early lexical and morpho-syntactic language development. In Hashoul-Essa (2017), the MCDI was adapted into the Northern dialects of Palestinian Arabic yielding the Palestinian Arabic Communicative Development Inventory (PA-CDI). This adaptation was used to start mapping the early milestones of typical language development in PA and identifying children who may be at-risk for language delay or language impairment at a young age. Hashoul-Essa (2017) tested the PA-CDI with 56 toddlers, showing patterns of typical language development and, thus, demonstrating the PA-CDI's potential for identifying DLD.

The proposed study will take the PA-CDI one step further and explore the external validity of this measure for a wider population depicting varied dialects and varied socio-economic backgrounds. Another aim of the study is to map the differences between typical and atypical language development in PA speaking children ages 18-36 months and examine how these differences might be influenced by the unique features of Arabic.

In order to lay the grounds for this investigation, the literature review below starts with a sketch of Palestinian Arabic, followed by a discussion of typical language development, discussing lexical development and morphosyntactic development. A brief discussion of the Communicative Development Inventories comes next, followed by a discussion of DLD and the diagnostic potential of the MCDI. Finally, the adaptation of the MCDI into Palestinian Arabic will be discussed briefly, followed by some PA-CDI pilot study results.

(2) Literature Review

(2.1) A Brief Sketch of Palestinian Arabic

Arabic is characterized by diglossia, a sociolinguistic context in which there are primary dialects or vernaculars used for everyday informal speech along with "a very divergent highly codified superposed variety" used for writing and for formal communicative functions (Ferguson 1959; Saiegh-Haddad & Henkin-Roitfarb, 2014).

The Arabic dialects used in Israel are dialects of the Palestinian Arabic (PA) vernacular (Henkin, 2000). This vernacular, like all other vernaculars of Arabic, differs from Modern Standard Arabic (*MSA*, *Fusha*) in phonology, lexicon, morphology, and syntax (Saiegh-Haddad & Spolsky, 2014, Eid, 1990). Growing up in a diglossic context like Arabic, a child speaks and hears mainly PA. S/he may be exposed to *Fusha* from television, prayers, study-book reading, etc. Nonetheless, extensive and intensive exposure to MSA starts at school, and mostly in the first grade together with literacy instruction. Thus, it follows that studies of the early acquisition of Arabic necessarily focus on the spoken dialect, PA in the present study.

Arabic is a Semitic language with rich nonconcatenative morphology characterized by a root and a derivational or inflectional pattern (Saiegh-Haddad & Henkin-Roitfarb 2014). PA lexical items involve a root (mainly of three or four consonants) and a template (a verbal pattern for deriving verbs and a nominal one for nouns). The root cannot stand on its own, however, it carries the core meaning. Inserting the root within the template produces a lexical item with its unique meaning and grammatical category (Saiegh-Haddad & Henkin-Roitfarb 2014). In verbal patterns, there are also inflections which indicate person (first, second or third), number (singular, dual or plural), tense (past, present, future), gender (feminine or masculine) and mood. Verbs agree with their subject in person, number and gender. There is no infinitive form of the verb in Arabic. It is important to note that there are slight differences in inflections that attach to the verb in the different dialects of PA as well as differences within the dialects themselves. PA Similar to verbal patterns, inflections added to nominal patterns indicate gender (masculine or feminine) and number (singular, dual, plural). There are three categories of plural in PA: masculine, feminine and broken plural. The dual in PA is not productive and is used only on nouns. PA Adjectives follow nouns in Arabic and agree with gender and number for the singular and plural forms. In PA, adjectives take the plural form for the dual.

Function words in Arabic include determiners, quantifiers, pronouns, prepositions, and conjunctions. Function words in Arabic can be either free or bound morphemes or both. Pronouns, prepositions, coordination, negation may all be free or bound. Pronouns, marking person, number and gender are manifested as free morphemes in the nominative case, but are null and reflected in subject-

verb agreement. Pronouns can also be object clitics on verbs or on prepositions. Some prepositions are bound to nouns or to pronouns while others are free morphemes, though still supporting object clitics. Definiteness is marked on the noun (with a bound morpheme) and negation is marked on the verb and may be expressed in three different ways: negating existence and imperatives using a bound or a free morpheme, negating verbal sentences using both a prefix and a suffix, and negating adjectives using a bound morpheme. Similarly, some coordination is marked with bound morphemes, while in other cases free morphemes are used. I suggest you add examples to all of these descriptions. Question words and subordinators are free morphemes. The PA-CDI, which was developed in 2017, takes these features into consideration while the selection of specific structures to be tested benefits from previous studies of typical language development in general and of Arabic in particular.

(2.2) Typical Language Development in Toddlers

Studies of typical and atypical language development are numerous, but not many focus on Arabic in general and PA in particular. Thus, studies of lexical development and morphosyntactic development, in general and in Palestinian Arabic, will follow a presentation of the more general process of language development.

In the first year of life, a child begins to develop prelinguistic skills that are prerequisites for language such as crying, cooing, babbling, looking together with the carer, imitating, appropriate play, making gestures, and producing performatives such as *'aw* 'woof' when seeing a dog (Ferguson 1975). Piaget (1954) discusses object permanence, the ability of a child to know that an object exists, even if it's out of his sight as another important precursor. As such, the development of object permanence happens before language production and is a sign that language is developing since it is only then that children start figuring out that things and people have labels or names. Bates et al (1975) also discuss early nonverbal communicative skills by the age of 12 months as a prerequisite to the onset of language. Tomasello (2003) found that it is when infants between nine and 12 months of age reach milestones that are important for the development of communication that they start to attend jointly to and communicate about objects and events. Butterworth (2003) found that pointing is one. Thal & Tobias (1994) found that a child who is late in both producing gestures and in producing language may be at higher risk for language delay than a child who is late in producing language but produces gestures.

In the second year of life, children move from single words to word combinations. The single word stage usually begins towards the end of the first year. Protowords such as *bidi*: 'I want' and

ma:ma: 'mom' are paraphrastic and are produced and serve as a whole sentence fulfilling multi functions (Halliday 1975). When a child utters *mom*, this utterance is context driven and it could mean that *I'm hungry, I want to sleep, or I want a toy*. This phase is followed by first-word combinations (1;6-2;0), which often appear once a child produces at least 50 words and comprehends at least 200. First, words are produced separately as two single ones often resulting in telegraphic speech (Bates 1995), and then they are produced in a predictable pattern. Again, the meaning is context dependent, so when a child utters '*mom ball*', he could mean *I want the ball, take the ball, here's the ball, etc.*

The third year of life is characterized by the development of grammatical knowledge. Children start combining more than two words using modifiers generating simple sentences (2;0-2;6), and later on more complex structures and complex sentences (2;6-6;0). During Piaget's preoperational stage (1954), which spans from 2 till 7 years of age, children develop a large lexicon and are able to produce language maturely and develop memory and imagination. This allows them to understand the difference between the past and the future; to remember what happened the day before; to think of the day after; and relate to it all with language, using lexical, syntactic and semantic knowledge.

(2.2.1) Acquisition of lexicon in general and in Palestinian Arabic

According to Clark (2009), children usually produce their first word at around the age of one year. By the age of 2 years, they may produce 100-600 words, and by age of 6 years up to 14,000, implying a rate of ten words acquired daily between the ages of 2 and 6. There is, however, enormous variance in the range of production of toddlers, as is evident in many studies. Lenneberg 1964 (*cf* Omar 1973) suggests that a child produces 20 words by 18 months, 200 words by 21 months and 300-400 words by 24 to 27 months. Fenson et al (1994) found that at 16 months, the average median was 44 words, and at 23 months, the average was 300 hundred words with a great variability. Bates et al (1994) show that by 1;0, the median of words produced is 6 words, by 1;4, the median is 40, by 1;8, 170 words are produced, by 2;0, 311 words, and by 2;6, the median 574. Maital et al (2000) show that at age 1;6 the median of words that Hebrew speaking toddlers produce is 75, and at age 2;0, the median is 362 words. The median between the ages 1;6 and 2;0 is 173.

Although not many studies have been conducted on the lexical development of Arabic speaking children, the research available seems to be in line with children acquiring English and other languages.

In studying the lexicon of PA speaking toddlers, two studies can be mentioned. The first is of Kadry (2009) who found that three of the children participating in the study produced their first words at the age of 8 months and one at the age of 11 months. Those same three children produced 100 words

at the age of a year and a half, and the latter produced 100 at the age of 32 months. Kadry found that when the children reached 100 words, 7-19 were verbs. The second is Abdo and Helo's (2010) case study of two of their children speaking Jordanian Arabic which is similar to PA in that it is a dialect of Eastern Arabic (Saiegh-Haddad & Henin-Roitfarb, 2014). They found that by 18 months, their son had 25 vocabulary items whilst their daughter had 15. By the age of 24 months, their son had 153 vocabulary items and their daughter had 119. By the age of 30 months, their son had 430 vocabulary items and their daughter had 324 and by the age of 36 months their son had 702 vocabulary items while their daughter had 560.

When children use single words, it is difficult to classify them by syntactic category since certain words are used by children both as nouns and as verbs. Griffiths & Atkinson (1978) show an example of how the word *door* may be interpreted as a verb, when a child indicates he wants the door to be opened. Bates et al. (1994) give other examples of a child who uses the adjective *hot* as a name for a stove or the word *up* as a verb when asking to be raised or held. However, most researchers (Nelson 1973, Al-Jabali 2003, Karam El-Deen 1989, Bates et al. 1994) have reported that nouns make up the highest proportion in the first 50 acquired words, followed by predicates (verbs and adjectives) and then by prepositions.

The content of toddlers' lexicon is all items from their surroundings. Clark (2009) classifies children's early vocabulary into a number of categories: people, food, body parts, clothing, animals, vehicles, toys, household objects, routines and activities or states. This is quite expected since children talk about what is going on in their daily lives. The largest category acquired in the one-word stage is the one of objects (Nelson 1973, Dromi 1999) that overlaps with the syntactic category of nouns. Bates et al. (1994) found that routines or social words appear earlier than common nouns in children's first words.

(2.2.2) Acquisition of morphosyntax in Palestinian Arabic

Regarding PA verb morphology, it was found that children first use verbs in their simplest forms with no morphemes, and later on, start using morphemes (Abdo and Helo 2010, Al-Jabali 2003, Rosenhouse 2000). Kadry (2009) found that the simplest conjugations were produced first, and later more complex ones were produced. With regards to the order of acquiring verbal morphology, Kadry (2009) found that gender was acquired first followed by number, perfective, third person, imperfective, imperative,

first person, and second person. With regards to subject verb agreement, third person was acquired first, followed by first person and last second person. Aljenai (2000) found that the use of inflections increased in frequency and accuracy with age.

In studying PA noun morphology, there seems to be a consistent pattern in the acquisition of plural; feminine plural is acquired before the masculine and broken plural (Omar 1973, Ravid & Farah 1999, Al-Buainain, H. 1999, Ravid and Hayek (2003) Kadry (2009), Daana (2009), Nawwab (2009), Abdo and Helo (2010), Aljenaie et al (2011), Saiegh-Haddad et al (2012). Omar (1973) found that as early as 1;8, children produce the plural form This is in line with Ravid & Farah (1999) and Rosenhouse (1998). The dual has been found to be acquired at a much later stage; after the age of 3 years (Rosenhouse 1998, Rosenhouse 2000, Ravid and Hayek 2003, Abdo and Helo 2010).

In studying PA negation, Omar (1973), Mohamed and Ouhalla (1995), Al-Buainain (2002), Abdo and Helo (2010) found that /la`/ is first acquired and used by the age of 2 years, and that /mish/, and then later on /ma/.../sh, are correctly produced after the age of 3 years. Regarding PA Pronouns, Abdo and Helo (2010) report no use of pronouns before the age of 18 months. Free pronouns were acquired before bound ones. The first pronoun produced was 'I'. Abdo and Helo (2010) report that prepositions were produced later than nouns and verbs. Prepositions were omitted in children's utterances till the age of 24 months and were misused up to the age of 5 years. Regarding Adjectives, Abdo and Helo (2010) found that they appeared at 18 months and that less abstract adjectives were acquired earlier than more abstract ones. Adjectives did not agree in gender and number before the age of 3 years and a half.

(2.3) Communicative Development Inventories (CDI)

Studying language development in toddlers is often based on longitudinal language samples or on parental diaries and reports (Fenson et al. 2007). The oldest parental reports were diaries in which parents had to write down words their children produced and comprehended. However, due to the fact that diaries had been found to be inaccurate in capturing the children's language development, questionnaires which ask parents to select words from a list were developed and they were subsequently found to be more accurate than diaries. The MacArthur Bates Communicative Development Inventories (MCDI) are questionnaires that taps into parents' knowledge of their children's early lexical and morpho-syntactic language development as well as cognitive development. These inventories consist of four questionnaires. The first attempts to use parents and care-givers to tap into their children's knowledge were made in the early 1970s. Data were then collected through

structured interviews and later through questionnaires. Parents and carers have been found to be a reliable source of information about the development of their children's language. In the 1980s, four questionnaire forms were developed covering four age ranges; 8-12 months, 12-18 months, 18-27 months and 24-36 months. Analysis of the data revealed the need for a questionnaire for toddlers and another for infants, and so the CDIs were further developed. The MCDI was developed in 1993 by Fenson, Marchman, Thal, Dale, Reznick and Bates after more than twenty years of research. Three questionnaires, which could capture children's language development more accurately, were developed

The first questionnaire of the MCDI is the 'Words and Gestures form' which is for children aged 8 -18 months. The Second is 'Words & Sentences', and this is for children aged 16 -30 months. The third, CDI –III, is for children between 30 -37 months and it measures expressive vocabulary and grammar (Fenson et al 2006). It is important to note that due to time constraints, three shorter forms have been developed. These forms may be completed in a much shorter time than the original MCDI since they have a very brief vocabulary list. The MCDI has been found to be a reliable measure yielding consistent results once replicated. Fenson et al. (1994) found high correlations between scores on vocabulary and grammar between the MCDI and the New Zealand adaptation of the MCDI. Roy et al. (2004) also found high correlations on vocabulary scores for the UK adaptation of the MCDI. Reliability was also found for the three short forms of the CDIs (Fenson et al 2000).

(2.4) DLD and the Diagnostic Potential of the MCDI

The MCDI have been used not only in order to describe typical language development creating norms but also to help with early identification of Developmental Language Disorder (DLD)

(2.4.1) Developmental Language Disorder (DLD)

Children whose language does not develop normally while having a normal cognitive, social, emotional and motor development are identified with Specific Language Impairment (SLI) and more recently as having a Developmental Language Disorder (DLD). The term DLD refers to children who have language difficulties, which continue beyond the age of five years, impacting the ability to communicate or learn. These language difficulties occur in the absence of a biomedical condition, neurodegenerative conditions, genetic conditions, sensorienural hearing loss, autism spectrum disorder or intellectual disability. Children with DLD have shown deficits in the area of syntax, morphology,

semantics, word finding, pragmatics, discourse, verbal learning/memory and phonology. However, it is important to note that those deficits are not shared by all children with DLD (Bishop et al. 2017).

The earliest marker for children with DLD is their slow lexical development, and at a later stage, these children show deficits in inflectional and derivational morphology and have a lower mean length of utterance than their typically developing peers. Gopnik & Crago (1991) claim there may be a genetic factor for DLD. In the study they conducted on the KE family, a three generation thirty member London family, they claim to have found a dominant gene that had passed through three generations for half the members of the study.

(2.4.2) MCDI and DLD

Since the PA-CDI can test children's non-verbal, lexical, morphosyntactic and syntactic development, using it can help identify the deficits of children with DLD in these language areas and may potentially help distinguish between children with typical and atypical language development.

Lexicon: Children with DLD show a delay in the onset of their first words and in word combination when compared to their typically developing peers (Leonard 1998). They also show a delay in producing certain word classes such as verbs (Fletcher and Peters 1984), although Hick et al (2002) found contradicting results and their findings indicate a similar rate of development of nouns and verbs for typically and atypically developing children. Fenson et al. (2006) argue for the diagnostic potential of the CDI in identifying children at risk for language delay or language impairment as they found that early identification helps design appropriate intervention programs and helps track progress in language development. Rescorla (1989), using the Language Development Survey (LDS), found that a child might be at risk for language impairment if by the age of 24, parents report less than 50 vocabulary items and a lack of two-word combinations. In Rescorla & Achenbach (2002), these criteria for identifying late talkers were subsequently changed to scoring below the 15th percentile on the LDS between 18 and 23 months of age. Subsequent follow up studies (Rescorla, Dahlsgaard, and Roberts 2000, Manhardt and Rescorla 2002, Rescorla 2002, Rescorla, 2005) indicated that most late talkers at age 2 were not delayed enough to warrant a label of language impairment, however, they did continue to demonstrate weakness in language as compared to their peers. Dale et al. (2003), after conducting a follow up study at the age of 3 and at the age of 4, classify late talkers who at the age of 2 scored below the 10th percentile (92 of 680 vocabulary items at 24 months for girls and 63 of 680 vocabulary items for boys (Fenson et al., 2007)) on the MCDI as at risk for language impairment..

Morphosyntax: English speaking toddlers with DLD have difficulties mostly in marking tense and agreement, resulting in the omission of inflectional morphology and auxiliaries (Rice et al. 1995). Hebrew speaking children with DLD were not found to show difficulty in their use of neither present nor past tense inflections requiring agreement with the subject (Dromi et al. 1993), but rather showed difficulties with specific inflectional morphemes in the nominal system such as plural formation, adjectival agreement, and the use of the accusative case marker.

By contrast, Hijazi Arabic speaking children with DLD do exhibit such difficulty, especially in the use of subject-verb agreement, past and present tense, determiners and prepositions. (Abdalla 2002). Morsi (2009) cited in Fahim (2017) found that Egyptian Arabic speaking children with DLD have difficulty only in the present tense; however, those children did not exhibit difficulties in agreement for number, person and gender. It was found that they use a verb form that resembles the imperative as a prominent substitution error. These results are similar to those of Fahim (2017) who also found that Egyptian speaking children with DLD had particular problems only with verb morphology and used default verb forms resembling the imperfective-stem and imperative as a substitution error. There was difficulty with subject-verb agreement for gender, number and person; however, there was no difficulty in marking for tense and aspect.

Syntax (MLU): Children with DLD have difficulty in analysing sentences with complex syntactic structures. This results in producing simpler and shorter sentences as is evident by the Mean Length of their Utterances (MLU). Rice et al. (2008, 2010) found that the MLU of five-year-old children with DLD is equivalent to that of typically developing children who are two years younger. Similar results were reported for Arabic speaking children with DLD. For example, Fahim (2017) found that whereas the MLU for typically developing 4-year-old Arabic speaking children was 7.5, the MLU for 4-year-old Arabic speaking children with DLD was less than 3.0, which was similar to that of typically developing children between the ages of 2 and 3 years.

(2.5) Adaptation of the MCDI into Palestinian Arabic

The PA-CDI (Hashoul-Essa, 2017) was developed to check the lexical and morphosyntactic development of children ages 18-36 months. Cultural and linguistic differences were taken into consideration when adapting this tool into Palestinian Arabic, generating a questionnaire with two main sections; the first on lexical and early non-verbal cognitive development, and the second on morphosyntactic and syntactic development.

The first section checks the production of 671 vocabulary items. The list of vocabulary is divided into 21 categories: sounds, animals, vehicles, games, clothing, drink and food, body parts, household items, furniture & rooms, outside things, places to go, people, action words, descriptive words, games & routines, time, pronouns & demonstratives, question words, prepositions & location, negation quantifiers & articles and last category, connectors. The first section is followed by 5 questions that tap into early cognitive development about absent objects/people and recognition of the future and past. Parents answer how often their child makes reference to absent objects/people or the past / future using ‘often’, ‘sometimes’ or ‘not yet’.

The second section checks children's morphosyntactic language development through 14 questions; dual (noun), plural (noun), broken plural, construct (possessive), past (singular first person), present progressive (singular first person), present progressive (singular third person), future (singular first person), future (plural second person), present progressive (plural third person), negation of verb, imperative with object pronoun, past with object pronoun, and imperative (feminine). Multiple choice answers range from simple utterances to complex ones. Parents are asked to choose the closest answer to their children's production. Within the answers, other aspects of language are checked like the use of possessive and object pronouns. In the second part of the second section, parents are asked to provide the 3 longest utterances their children have produced in order to get a measure of their MLUs.

(2.5.1) PA-CDI pilot study results

Hashoul-Essa (2017) aimed to develop a Palestinian Arabic Communicative Development Inventory in order to be able to start exploring early lexical and morpho-syntactic development among PA speaking children ages 18-36 months. This was expected to help in the long run to identify children who are at-risk for language delay or language impairment at a young age. Hashoul-Essa (2017) tested the PA-CDI with 56 toddlers, ages 18-36 months. While the sample was rather small and restricted to a single dialect, it showed the potential of the PA-CDI as patterns of typical language development emerged and revealed its potential for identifying DLD.

The findings for lexical development showed great variance in children’s production as has been reported in previous research, moving from 151 to 405 words by 24 months, to 451 to 638 words up to 30 months, and 466 to 631 words at 36 months. Children start by talking about foods and drinks, people and games, and routines around 24 months while making reference to other categories at a later age. As expected, nouns made up the largest category in the children’s production, followed by verbs, adjectives, pronouns, followed by quantifiers, words about time, then prepositions, and last connecting words;

however, the share of these categories in the questionnaire itself was clearly reflected. Most of the younger group showed a use of nouns only, with limited use of verbs or adjectives or any other grammatical categories. In the middle group, nouns still occupied the biggest proportion; however, verbs and adjectives were produced. In the older group, nouns still dominated, but a production of verbs, adjectives as well as closed class items had already expanded.

Regarding morphosyntactic development, feminine plural is produced by most children before the broken plural and the dual which were produced by very few children and only in the second half of their third year of life. The most basic form of negation, negating existence and imperatives using /la`/or /wala/- meaning 'no', or using *biddish* 'I don't want', is already produced by some children at the age of 18 months, and is used by all children shortly after their second birthday. Past and present tenses are produced towards the end of their second year and are almost mastered in the second half of their third year of life. Likewise for future tenses, which were also acquired towards the end of their second year; however, and unlike the singular form, future first person plural was produced by only a few children towards their third year. The imperative is produced by most children in the beginning of their third year whereas the construct-state only starts to be produced in the second half of their third year of life, and by very few children.

The high correlations between age and the different parts of the PA-CDI indicated its potential for assessing the development of PA amongst toddlers. Moreover, the high correlations between the four parts of the PA-CDI (lexicon, early cognitive development, morphosyntax, and syntax) show what milestones might be needed for acquiring specific structures Hashoul-Essa (2017).

Regarding the PA-CDI's diagnostic potential, previous studies suggested that reporting less than 50 vocabulary items up to the age of 2 (Rescorla 1989), or scoring below the 10th percentile (Dale et al. 2003) might indicate risk of DLD. A genetic factor (Gopnik & Crago 1991) has also been reported. The relatively small number of participants made it possible to study each individually and identify 5 children who seemed to be at risk for DLD due to the fact that they were below the 10th percentile for their age groups (looking at a 6 months range), and those up to 24 months had less than 50 words. Those specific individuals had a smaller number vocabulary items and lower scores on cognitive development than their peers, did not produce specific morpho-syntactic structures when most of their peers did, and had lower MLUs. They also had a sibling with DLD. These findings suggested that those specific toddlers could be at risk for DLD and highlight the diagnostic potential of the PA-CDI. Further research is needed, however, to validate the above findings with a larger number of children of different dialects and different SES and to be able to identify milestones for PA development and specific markers for DLD in PA.

(3) Research Questions and Hypotheses

The proposed research aims to identify risk factors for language development among PA speaking children ages 18-36 months. Identifying those risk factors is expected to enable an early identification of language impairment which may thus lead to early intervention and treatment in order to prevent other developmental problems from occurring as side effects of language impairment.

The findings of our pilot study have already shed some light on the nature of PA language acquisition, for a small group of participants, all speakers of the Northern dialect. However, further research needs to be conducted. Not only is a more representative sample needed, but a more comprehensive and a clearer description of morpho-syntactic development as well as lexical development is needed, and this can be reached with the changes induced in the revised PA-CDI. Although our pilot study aimed at understanding PA language acquisition, it did not take into consideration demographic information as gender, dialects, socio economic status, and DLD, nor did it take into consideration crucial information about first milestones. Moreover, due to the small number of children, they were grouped into three age groups, 6 months each, rather than providing a month by month developmental trajectory. Taking those variables into consideration and testing a larger number of children is expected to yield a better and a more precise account of the developmental pattern in toddlers' lexicon, cognitive, syntactic and morpho-syntactic language abilities and shed light on the impact of the particular properties of Arabic on PA language development and language disorder.

With more children in the sample, it will further be possible to identify markers of DLD. In the pilot study children were identified as being at-risk for DLD based on general scores looking at case studies. A more robust exploration, with a larger number of children that combines both results from detailed scores on the PA-CDI as well as demographic information in addition to information on early milestones such as when the child started talking and combining words, will be more helpful in identifying risk factors for language development among Palestinian Arabic speaking children. A follow-up study of toddlers found at risk for DLD might further give a more precise view on the potential of this tool in identifying children at risk at the very early stages of language development, and might thus enable early intervention. This will be one of the goals of the proposed research.

To address these challenges, the following research questions will be investigated.

1. What are the milestones for the acquisition of lexicon, morphosyntax and syntax for PA speaking children aged 18 to 36 months?

A month by month investigation is expected to show a gradual development of lexical knowledge from almost 30 words at the age of 18 months to almost 500 words at the age of 36 months. Likewise, we expect to see development of morphosyntactic abilities where younger children are only able to produce very simple forms such as the present third person singular, future first person singular, and the frozen verb negation *biddish* whereas older children will be able to already use future second person plural and past first person singular with object pronoun. Furthermore, we expect to find evidence for a gap between knowledge of regular plural, broken plural and dual. We further expect to see inflections such as those for the past acquired before inflections for the present. Moreover, we expect early cognitive development to show more variability amongst the younger group than the older ones as they give way to language skills. Regarding MLU, it is expected that children will show gradual growth in the number of morphemes they produce as they get older.

2. What are the differences in the language development of PA typically and atypically developing children aged 18 to 36 months? How is this related to other developmental milestones?

As found in the studies reviewed above for a variety of languages, it is expected that atypically developing children will score lower than the average of those who are typically developing on the PA-CDI. They will have a smaller vocabulary. They will also demonstrate deficits in their morpho-syntactic knowledge; they will have difficulty in marking tense and subject-verb agreement and will use a default form which resembles the imperative as a substitute for verbs, and they will omit the definite article and some prepositions, mainly non-locative. They will, moreover, score lower on early cognitive development and their MLU will be much lower than their typically developing peers. Furthermore, information on early milestones, family history, parents' concern and demographic data will differentiate between typically and atypically developing children. It is expected that children who were late in the onset of language, late in combining words, have family members with language difficulties, or have their parents concerned about their production will score much lower on the PA-CDI and thus may be at risk for DLD.

3. Is the PA-CDI a valid instrument?

It is expected that the PA-CDI will indeed be a valid measure. For the proposed study, validity of the PA-CDI will be assessed through a follow-up with a subset of the participants (including those found at risk for DLD). Such a follow-up study, a year after the first report was provided, will make it possible to find out whether the children identified as being at risk for DLD still manifest at risk symptoms.

(4) Methodology

(4.1) Participants

Mothers of toddlers, ages ranging between 18 and 36 months will participate. At least thirty toddlers will be recruited for each month to meet the total of 540 participants. Mothers will be recruited from villages and towns throughout Israel and they will speak Palestinian Arabic as a first language. A hundred mothers of toddlers at risk for DLD, with a sibling, a mom, a dad, or another relative who has some learning disabilities including DLD, will be recruited as well. These hundred mothers as well as a hundred from the larger cohort will be contacted a year later for a second assessment.

(4.2) The PA-CDI revised version

A closer observation of the pilot PA-CDI (Hashoul-Essa, 2017) and its results gave some important insights. It was found that in order to get a more comprehensive and clearer understanding of morpho-syntactic development as well as lexical development, a few changes should be introduced. First, five more morphosyntactic structures including negation of the verb, masculine plural and other verb forms with different numbers and persons have been added to the revised PA-CDI in order to shed more light on the nature of toddlers' production patterns. Moreover, based on parents' suggestions in the pilot, some more possible answers were added to the different items and the option for 'other' was dropped in order to maintain uniformity in the responses. For the vocabulary list, certain vocabulary items, such as *penguin* and *wish*, were produced by a very few children even at the age of 3 years and have been removed from the questionnaire. It is important to note that the revised version of the PA-CDI will cater to the different dialects of Palestinian Arabic providing alternatives for the vocabulary items and targeting morphosyntactic knowledge that is used similarly in the different dialects.

A background information questionnaire will be added to the PA-CDI in order to get demographic information as well as information on early milestones, which is expected to be most useful in identifying risk factors for language development among Palestinian Arabic speaking children.

(4.3) Procedure

The PA-CDI will be distributed online to Palestinian Arabic speaking mothers. Mothers will get directions on how to fill in the PA-CDI. In order to collect information regarding the child's background and early developmental milestones, the parents will be asked to fill online a short parental questionnaire as well. Since one of the aims of this research will be to test whether the PA-CDI can help identify children who are at-risk for DLD and in order to test whether there be more at-risk children among children with family members who have learning disabilities (including DLD), the researcher will approach mothers of toddlers whose siblings have been diagnosed with DLD and have already been attending a special kindergarten for

children with LD to encourage them to fill in the PA-CDI. Since lower social economic status will also be studied in the proposed study, it might be necessary for the researcher to meet those parents who may not have access to the online form or might be illiterate, and fill in the form together with the parent.

(4.4) Data analysis

A data base will be created from the questionnaires and will be analyzed for early cognitive, lexical, morphosyntactic and syntactic development. For lexical development, we will look at the overall number of words within each semantic and syntactic category in order to explore developmental patterns. Correlations with different background and demographic variables will be taken into consideration as well. The data will be divided by months, and GLMs will be used to compare the groups for the different parts, followed by post hoc tests. An item analysis will be conducted, to identify vocabulary items produced by more than 75% of the children in each category and for each age group as well as the number of vocabulary items which were not produced by the age of three years. When 75% of the participants in an age group produce a certain word, it will be stated that that specific word has already been acquired by that age group. Although 90% is the measure of productive use that is usually used in research (Brown 1973), it is used when measuring productivity for a single child. The choice of 75% is based on the fact that a group production was measured and not individual children, and in order to be able to state that most children produce a certain word. For early cognitive development, answers provided by mothers of toddlers will be given zero points if a toddler does not yet produce the reference, one point if a toddler sometimes produces the reference, and two points if a toddler often produces the reference. With regards to the grammatical categories, scoring will be done at two levels. At the first level, the answer will be given a score of 1 for correct and of 0 for incorrect reflecting correct use of the grammatical items. At the second level, the linguistic complexity of the correct responses will be explored and answers will be given different scores depending on the complexity of the answer. Scores range between 0-4 for certain structures, 0-5, 0-6, 0-7, and 0-8 for other structures. For example, an answer like 'I don't want to' will be given fewer points than the answer 'I don't want to eat my bread'. Furthermore, correlations between the different parts of the PA-CDI will be calculated. With regards to calculating MLU, the average MLU by number of morphemes in the children's three longest utterances given by parents will be calculated. Abu-Shakra's (2012) measure will be adopted. For example, *bikitbu* (they write) will be counted as three morphemes as there is the stem, marking of present *bi*, and marking of plural *u*.

5. Contributions of the study

Little is known about Palestinian Arabic (PA) language acquisition before the age of three as it has not been studied thoroughly and less is known about markers of DLD amongst PA speakers at this age group. This study will contribute to our understanding of the developmental path that Palestinian Arabic children go through in acquiring their language across different dialects. It is further expected to shed light on the impact of socio economic status on the development of Palestinian Arabic. Such knowledge will make it possible to create norms for the development of Palestinian Arabic and provide a tool that could identify risk factors for language development among Palestinian Arabic speaking children ages 18-36 months. This, in turn, will enable early intervention, so children with language impairment can receive treatment at an earlier age. The development of the PA-CDI will further make it possible to make cross language comparisons in both monolingual and bilingual contexts as the CDI is already available in many other languages.

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References

- Abdalla, F. (2002). Specific Language Impairment in Arabic- Speaking children: Deficits and morphosyntax. Ph.D dissertation. McGill University.
- Abdalla F, Crago M. (2008). Verb morphology deficits in Arabic-speaking children with specific language impairment. *Applied Psycholinguistics*. 29:315–340
- Abdo and Helo. (2010). The language of Infants: Words and Sentences. Dar Jareer Publication
- Abu-Shakra, N. (2012). MLU as a Measure for Evaluating Language Level of Palestinian Arabic speaking Children. MA Thesis. Tel-Aviv University
- Al-Buainain, H. (2002). Developmental stages of the acquisition of negation and interrogation by children native speakers of Qatari dialect. Qatar University
- Al-Buainain, H. (1999). “ Creativity / Productivity of Child’s Language: a Case study of Qatari Dialect”, Bulletin of the Documentation and Humanities Research Centre, Vol. (1999) (pp.7-26) Qatar.
- Aljenai, Kh .(2009). Verb inflections in Kuwaiti Arabic–speaking children. *Journal of Child Language* 37(4) (841-63)
- Aljenaie, Kh. (2000). The emergence of tense and agreement in Kuwaiti children speaking Arabic. In R. Ingham & P. Kerswill (eds.) Reading Working Papers in Linguistics 4: 1-24.
- Basaffar, F &Safi,S. (2012). The Acquisition of Verb Inflections in Hijazi Arabic. *AWEJ* Vol.3 No.2 June 2012 pp. 266 – 304
- Bates, Elizabeth; Camaioni, Luigia & Volterra, Virginia (1975) The acquisition of performatives prior to speech. *Merrill-Palmer Quarterly* 21: 205–226.
- Bates, E., Bretherton, I., and Synder, L. (1988). From first words to grammar: Individual differences and dissociable mechanisms. New York. Cambridge University Press
- Bates, E., Marchman, V., Thal, D., Fenson, L., Dale, P., Reznick, J.S., Reilly, J.,S. & Hartung, J. (1994). Developmental and stylistic variation in the composition of early vocabulary. *Child Language*. Cambridge University Press. 21 (85-123)
- Benedict, H. (1979). Early lexical development: Comprehension and production. *Journal of Child Language* 6, 183–200
- Bishop, D., Snowling, M., Thompson, P., Greenhalgh,T., and the CATALISE-2 consortium. (2017) Phase 2 of CATALISE: a multinational and multidisciplinary Delphi consensus study of

- problems with language development: Terminology. *Journal of Child Psychology and Psychiatry* 58:10. pp 1068–108
- Bloom, L., Merkin, S. & Wooten, J. (1982). Wh-questions: linguistic factors that contribute to the sequence of acquisition. *Child Development* 53, 1084–92.
- Brown, R. (1973). *A First Language: The Early Stage*. Cambridge. Harvard University Press
- Butterworth, George (2003) Pointing is the royal road to language for babies. In Sotaro Kita (ed.), *Pointing: Where Language, Culture and Cognition Meet*, pp. 9–33. Mahwah, NJ/London: Lawrence Erlbaum.
- Clark, E. (1979). Building a Vocabulary: Words for Objects, Actions and Relations. In P. Fletcher & M. Garman (eds.), *Language Acquisition* (149-160). Cambridge University Press
- Clark, E. (2009). *First Language Acquisition* (2nd edition). Cambridge: Cambridge University Press
- Dale, P. (1991). The validity of a parent report measure on vocabulary and syntax at 24 months. *Journal of Speech and Hearing Research*, 34, 565-571.
- Dale, P., Bates, E., Reznick, J.S., & Morriset, C. (1989). The validity of a parent report instrument of child language at 20 months. *Journal of Child Language*, 16, 239- 249.
- Dale, P., Price, T., Bishop, D. & Plomin, R. (2003). Outcomes of early language delay: Predicting persistent and transient language difficulties at 3 and 4 years. *Journal of Speech, Language, and Hearing Research*, 46, 3: 544
- Dixon, J. & Marchman, V. (2007). Grammar and the lexicon: Developmental ordering in language acquisition. *Child Development*, 78, 190-212.
- Dromi, E and Berman, R (1986). Language-specific and language-general in developing syntax. *Journal of Child Language*, 13, pp 371-387
- Dromi, E. Leonard, L. & Shteiman, M. (1993). The grammatical morphology of Hebrew speaking children with specific language impairment: some competing hypotheses. *Journal of Speech and Hearing Research*, 36, 760-771
- Dromi, E., Leonard, LB., Adam, G., & Zadunaisky-Ehrlich, S. (1999). Verb Agreement Morphology in Hebrew-Speaking Children With Specific Language Impairment. *Journal of Speech, Language and Hearing*. 42(6):1414-31.
- Dromi, E. (1999). Early Lexical Development. *The Development of Language*. Psychology Press. (99-128)
- Fahim, D. (2017). Verb Morphology in Egyptian Arabic Developmental Language Impairment. *Arab Journal of Applied Linguistics* Vol. 2, No. 1, 49-73

- Fenson, L., Dale, P., Reznick, J., Bates, E., Thal, D., & Pethick, S. (1994). Variability in early communicative development. *Monographs of the Society of Research in Child Development*, 242, 59(5)
- Fenson, L., Pethick, S., Renda, C., Cox, J.L., Dale, P.S., & Reznick, J.S. (2000). Short-form versions of the MacArthur Communicative Development Inventories. *Applied Psycholinguistics*, 21, 95-115.
- Fenson, L., Marchman, V., Thal, D., Dale, P., Reznick, S., & Bates, E. (2006). *The MacArthur Communicative Development Inventories: User's guide and technical manual* (2nd ed.). Baltimore: Brookes.
- Ferguson, C. A. (1959). Diglossia. *Word* 15:325-40.
- Fletcher, P. and Peters, J. (1984). Characterizing language impairment in children: an exploratory study. *Language Testing* 1, 33-49
- Gopnik, M., Crago MB. (1991). Familial aggregation of a developmental language disorder. *Cognition*. 39(1):1-50.
- Griffiths, P. and Atkinson, M. (1978) 'A "door" to verbs', in N. Waterson and C. Snow (eds) *The Development of Communication*, Chichester: Wiley.
- Halliday, M.A.K. (1975). *Learning How to Mean: Explanations in the Development of Language*, London: Edward Arnold.
- Hilmi, M. & Fetouh, A. (1969). *Morphological Study of Egyptian Colloquial Arabic*. The Hague: Mouton
- Ingram, E. (1989). *First Language Acquisition: Method, Description and Explanation*. Cambridge: Cambridge University Press
- Kadri, A. (2009). *The Early Acquisition of Palestinian Spoken Arabic Vernacular by Uni and Bi-Dialectal Children*. Ph.D Thesis. Bar Ilan University
- Karam El-Deen, L. (1989). *The most Produced Vocabulary Items in Children aged One to Six*. Dar El-Feker El-Arabi. Egypt FFFIIINNNDDDD
- Karam El-Deen, L. (2004). *A Child's Language Prior to School*. Dar El-Feker El-Arabi. Egypt
- Khamis-Dakwar, R., Al-Askary, H., Benmamoun, A., Ouali, H., Green, H., Leung, T., & Al-Asbahi, K. (2012, September 30). Cultural and linguistic guidelines for language evaluation of Arab-American children using the Clinical Evaluation of Language Fundamentals (CELF)

- Law, J. & Roy, P. (2008). Parental Report of Infant Language Skills: A Review of the development and Application of the Communicative Development Inventories. *Child and Adolescent Mental Health*, 13, 4, 198-206.
- Leonard, L. (1998) Children with specific Language Impairment. Cambridge MIT Press. 417-446
- Mahfoudhi, A. & Abdalla, F. (2017). Language Development and Impairment in Arabic-speaking Children: Introduction to the Special Issue. *Arab Journal of Applied Linguistics* e-ISSN 2490-4198 Vol. 2, No. 1
- Maital, SL. Dromi, E. Sagi, A. Bornstein, MH. (2000). The Hebrew Communicative Development Inventory: language specific properties and cross-linguistic generalizations. *Journal of Child Language*. Feb ;27(1):43-67
- Manhardt J, Rescorla L. Oral narrative skills of late talkers at ages 8 and 9. *Applied Psycholinguistics* 2002;23:1–21
- Marchman, V. A. & Bates, E. (1994). Continuity in lexical and morphological development: a test of the critical mass hypothesis. *Journal of Child Language* 21, 339-366
- Marinis, T. (2011) On the Nature and Causes of Specific Language Impairment: a view from sentence processing and infant research. *Lingua*, 121, 463-475
- Mohamed and Ouhalla (1995) cited in Fatima BadryZalami, "First Language Acquisition", in: *Encyclopedia of Arabic Language and Linguistics*, Managing Editors Online Edition: Lutz Edzard, Rudolf de Jong. Consulted online on 11 July 2016
- Nelson, K. (1973) Structure and Strategy in Learning to Talk, Monographs of the Society for Research in Child Development, 38 (Serial No. 149)
- Ntelitheos, D. et al. (2013). The Development of Morphosyntactic Complexity in Emirate Arabic. United Arab Emirates University
- Omar, M. (1973). The Acquisition of Egyptian Arabic. The Hague and Paris. Mouton
- Ravid, D. & R. Farah.(1999). Learning about Noun Plurals in Early Palestinian Arabic. *First Language*, 19, 187-206.
- Ravid, D. & L. Hayek. Learning about different ways of expressing number in the development of Palestinian Arabic. *First Language*, 23, 41-63, 2003.
- Ravid, D., & Farah, R. (2009). Noun plurals in early Palestinian Arabic: A longitudinal case study. In U. Stephany & M. D. Voeikova (Eds.), *Development of nominal inflection in first language acquisition A cross-linguistic perspective (SOLA 30)* (pp. 411–432). Amsterdam: Mouton de Gruyter

- Rescorla, L. (1989). The Language Development Survey: A Screening Tool for Delayed Language in Toddlers. *The Journal of Speech and Hearing Disorders* 54.4: 587
- Rescorla L, Achenbach TM. Use of the language development survey (LDS) in a national probability sample of children 18 to 35 months old. *Journal of Speech, Language, and Hearing Research* 2002;45:733–743
- Rescorla L. Do late-talking toddlers turn out to have reading difficulties a decade later? *Annals of Dyslexia* 2000;50:87–102.
- Rescorla L, Dahlsgaard K, Roberts J. Late-talking toddlers: MLU and IPSyn outcomes at 3;0 and 4;0. *Journal of Child Language* 2000;27:643–664. [PubMed: 11089342]
- Rescorla L. Language and reading outcomes to age 9 in late-talking toddlers. *Journal of Speech, Language, and Hearing Research* 2002;45:360–371.
- Rescorla L. Age 13 language and reading outcomes in late-talking toddlers. *Journal of Speech, Language, and Hearing Research* 2005;48:459–472.
- Rescorla, L.A. (2013). Late-talking toddlers: A 15-year follow-up. In L.A. Rescorla & P.S.Dale (Eds.). *Late talkers: Language development, interventions, and outcomes*. Baltimore, MD: Paul H. Brookes Publishing Company."
- Rice, M. Wexler, K. & Cleave, P. (1995). Specific Language Impairment as a Period of Extended Optional Infinitive. *Journal of Speech and Hearing Research*, Vol 38, 850-863
- Rice, M., Redmond, S. & Hoffman, L. (2006). Mean length of utterance in children with specific language impairment and in younger control children shows concurrent validity and stable and parallel growth trajectories. Faculty publications. Department of Psychology. Paper 435
- Rice, M., Smolik, F., Perpich, D., Thompson, T., Rytting, N., and Blossom, M. (2010). Mean Length of Utterance Levels in 6-Month Intervals for Children 3 to 9 Years with and Without Language Impairments. *Journal of Speech, Language, and Hearing Research*, Vol. 53, 333-349.
- Rosenhouse, J. (2000). The Acquisition of Arabic as Mother Tongue. *Oriente Moderno* 19 (80) (119-151)
- Rosenhouse, J. (1998). The Acquisition of Morphology and Syntax of Colloquial Arabic as Mother Tongue. *HelqatLeshon*, 27. (76-93). (in Hebrew)
- Rowland, Caroline F., Julian M. Pine, Elena V. M. Lieven, and Anna Theakston. (2003). *Determinants of acquisition order in wh-questions: Re-evaluating the role of caregiver speech*. *Journal of Child Language*. v30 n3 p609-35

- Rowland, C. F. and S. L. Fletcher (2006). The effect of sampling on estimates of lexical specificity and error rates. *Journal of Child Language*, 33 (4), pp 859-877
- Saiegh-Haddad, E., & Henkin-Roitfarb, R. (2014). The structure of Arabic language and orthography. In E. Saiegh Haddad & M. Joshi (Eds.), *Handbook of Arabic literacy: Insights and perspectives*. Springer.
- Saiegh-Haddad, E., A. Hadieh & D. Ravid. (2012). Acquiring Noun Plurals in Palestinian Arabic: Morphology, familiarity, and pattern frequency. *Language Learning*, 62, 1024-1051.
- Saiegh-Haddad, E. (2003a). Linguistic distance and initial reading Acquisition: The case of Arabic diglossia. *Applied Psycholinguistics*, 24, 431-451.
- Salim, J & Mehawesh, M. (2014). *Stages in Language Acquisition: A Case Study*. English Language and Literature Studies. Vol 4. No 4. 16-24
- Shaker, H. & Yaseen, B. (2015). Acquisition of English Prepositions among Iraqi Secondary School Students in Kuala Lumpur- Malaysia. *Advances in Language and Literary Studies*, Vol 6, No 5
- Shamsan, M. & Attayib, A. (2015). Inflectional Morphology in Arabic and English: A Contrastive Study. *International Journal of English Linguistics*; Vol. 5, No. 2; 2015
- Thal, D., & Tobias, S. (1994). Relationships between language and gesture in normally developing and late-talking toddlers. *Journal of Speech and Hearing Research*, 37, 157-170
- Tomasello, M. (1994). *First Verbs: A Case Study of Early Grammatical Development*. *The American Journal of Psychology*
- Wilkins S. J. Wilkins and Rogers D. R. (1987). Possessive Pronouns: Why Are Plurals Harder? *Journal of Psycholinguistic Research*, Vol. 16, No. 6

Websites

<http://mb-cdi.stanford.edu/>

اختبار قياس تطوّر التواصل اللغويّ عند الطفل العربي

اسم الطفل: _____ الجنس: _____
تاريخ الميلاد: _____ تاريخ اليوم: _____

لقد أجريت دراسات سابقة في مجال تطوّر الاطفال في العالم، أشارت إلى أهميّة متابعة تطوّر التواصل واللغة عند الاطفال من جيل مبكّر. تهدف الاستمارة التالية إلى فحص تطوّر التواصل اللغويّ عند الطفل العربي من جيل سنة وستة أشهر حتى ثلاث سنوات. تشمل الاستمارة قائمة لكلمات، وجمل، أو ألعاب وفعاليات معينة قد يقولها الأطفال.

أثبتت الدراسات أنّ الوالدين يشكّلان المصدر الأوّل والرئيس لفحص تطوّر طفلهم، لذا فإنّ تعاونكم قد يساعدنا على فهم تطوّر التواصل اللغوي عند الاطفال بشكل أفضل.

جدير بالتنويه بأنّه ليس بمقدور الطفل أن ينطق ويردّد كل الكلمات الموجودة في القائمة التالية في هذا الجيل.

لا يوجد أي سبب للقلق إذا كان الطفل في هذا الجيل ينطق قسماً صغيراً جداً من الكلمات أو الجمل الموجودة في القائمة التالية. لكل طفل وتيرة تطور خاصة به.

من أجل ملء الاستمارة، عليكم قراءة القوائم، ثم الإشارة إلى الكلمات التي يقولها طفلكم. حتى إذا كان طفلكم يقول كلمة معينة بشكل جزئي (مثلاً تكتور بدل تراكتور أو صاصا بدل مصاصة أو مبو بدل ماء)، هذا يُحسب كلمة يقولها طفلكم وعندها عليكم الإشارة لها بالقائمة.

جدير بالتنويه أن التعليمات كُتبت باللغة المعيارية الفصحى بينما الكلمات والجمل باللغة العامية، لذلك كُتبت قسم كبير من الكلمات بشكل يتلاءم مع لفظها وليس كما يجب بالفعل كتابتها. إذا كانت هناك كلمة تستخدمونها بشكل مختلف بلهجتكم، الرجاء الإشارة لها في القائمة وكتابة الكلمة المستعملة بجانبها (مثلاً زلفة بدل ملعقة).

كُتبت بعض الكلمات بحرف ال"ق"، لكن لفظها قد يختلف من لهجة لأخرى ويمكن أن تلفظ بالهمزة أو بالكاف أو الجيم المصرية (مثلاً قلم قد تلفظ ألم أو كلم أو چلم). بعض الكلمات تنتهي بالتاء المربوطة، ولكن ممكن أن تلفظ بالياء أو الالف (مثلاً جاجة قد تلفظ جاجي أو جاجا)

جدير بالتنويه أنّ المعلومات ستكون سرية ولن تستخدم إلا لهدف هذا البحث.

الرجاء قراءة كل التعليمات الموجودة بكل قسم بالاستمارة.

شكراً جزيلاً على تعاونكم

هذه الاستمارة مأخوذة عن MacArthur-Bates Communicative Development Inventories والتي ألفها Fenson, Dale, Reznick, Thal, Bates, Hartung, Phethick & Reilly (1991).

القسم الاول: كلمات الطفل الاولى

(أ) قسم الكلمات

الرجاء الإشارة الى الكلمات التي سمعت طفلك يقولها ب X, حتى ولو قالها بشكل غير واضح أو بشكل جزئي.

للتذكير: اذا كانت هناك كلمة تستخدمونها بشكل مختلف في لهجتكم, الرجاء الإشارة إليها في القائمة وكتابة الكلمة المستعملة بجانبها (مثلاً زلفة بدل ملعقة).

1. الرجاء الإشارة الى الاصوات التي سمعت طفلك يصدرها (18)

<input type="checkbox"/> مَم مَم (الاكل)	<input type="checkbox"/> سيسي (صوت العصفور)	<input type="checkbox"/> أحو / أحو (بارد)
<input type="checkbox"/> مووو (صوت البقرة)	<input type="checkbox"/> شششش (هدوء)	<input type="checkbox"/> أفا (ساخن)
<input type="checkbox"/> كواك كواك (صوت بطّة)	<input type="checkbox"/> فَن فَن (صوت سيارة)	<input type="checkbox"/> بح (لا يوجد)
<input type="checkbox"/> واوا / أي (صوت التآلم)	<input type="checkbox"/> كوكوريكو (صوت الديك)	<input type="checkbox"/> بق بق بقيق (صوت الدجاجة)
<input type="checkbox"/> وي وا (صوت سيارة الشرطة)	<input type="checkbox"/> ماء ماء (صوت الماعز)	<input type="checkbox"/> دَح (حلو/ جديد)
<input type="checkbox"/> يما (صوت عند الخوف)	<input type="checkbox"/> مياو (صوت القطّة)	<input type="checkbox"/> عوعو (صوت الكلب)

2. حيوانات (حقيقية أو ألعاب): الرجاء الإشارة الى الكلمات التي سمعت طفلك يقولها (43)

<input type="checkbox"/> غزال	<input type="checkbox"/> دولفين	<input type="checkbox"/> حشرة	<input type="checkbox"/> أرنب
<input type="checkbox"/> فار	<input type="checkbox"/> ذئب	<input type="checkbox"/> حصان	<input type="checkbox"/> أسد
<input type="checkbox"/> فراشة	<input type="checkbox"/> زرافة	<input type="checkbox"/> حوت	<input type="checkbox"/> پاندا
<input type="checkbox"/> فيل	<input type="checkbox"/> زبيرا / حمار الوحش	<input type="checkbox"/> حية / ثعبان	<input type="checkbox"/> ببغاء
<input type="checkbox"/> فرد	<input type="checkbox"/> سلحفاة	<input type="checkbox"/> حمار	<input type="checkbox"/> بسة
<input type="checkbox"/> كلب (بوبي)	<input type="checkbox"/> سمكة	<input type="checkbox"/> حيوان	<input type="checkbox"/> بطّة
<input type="checkbox"/> نحلة	<input type="checkbox"/> سنجاب	<input type="checkbox"/> خروف	<input type="checkbox"/> بطريق
<input type="checkbox"/> نمر	<input type="checkbox"/> صوص	<input type="checkbox"/> خنزير	<input type="checkbox"/> بقرّة
<input type="checkbox"/> نملة	<input type="checkbox"/> ضفدع	<input type="checkbox"/> دب	<input type="checkbox"/> بومة
<input type="checkbox"/> وزّة	<input type="checkbox"/> عصفور	<input type="checkbox"/> ديدوب	<input type="checkbox"/> تمساح
	<input type="checkbox"/> عنزة	<input type="checkbox"/> ديك	<input type="checkbox"/> جاجة (دجاجة)

3. وسائل النقل : الرجاء الإشارة الى الكلمات التي سمعت طفلك يقولها (16)



اطفائية / سيارة اطفاء	بيمبا (سيارة للعب)	سيارة/بيب	عربي
<input type="checkbox"/> أمبولانس / سيارة اسعاف	<input type="checkbox"/> تراكتور	<input type="checkbox"/> سيارة بوليس	<input type="checkbox"/> قارب
<input type="checkbox"/> باص	<input type="checkbox"/> ترين / قطار	<input type="checkbox"/> شحن / تْرَك	<input type="checkbox"/> موتورسيكل / ماطور
<input type="checkbox"/> بسكليت / دراجة	<input type="checkbox"/> سفينة	<input type="checkbox"/> طائرة	<input type="checkbox"/> هلكوبتر

4. ألعاب: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (26)

<input type="checkbox"/> ألوان / تلاوين	<input type="checkbox"/> خرز	<input type="checkbox"/> قلم	<input type="checkbox"/> مكعبات
<input type="checkbox"/> ابياد / ايفون/ تابلت	<input type="checkbox"/> خيمة	<input type="checkbox"/> لُزْبِق (شريط لاصق)	<input type="checkbox"/> مكياج
<input type="checkbox"/> باربي	<input type="checkbox"/> دبق / غرا	<input type="checkbox"/> لعبة /نُبو (عروس)	<input type="checkbox"/> مناكير
<input type="checkbox"/> پازل	<input type="checkbox"/> دف	<input type="checkbox"/> ليجو	<input type="checkbox"/> هدية
<input type="checkbox"/> بالون	<input type="checkbox"/> طابطة	<input type="checkbox"/> محشيف/كومبيوتر	<input type="checkbox"/> ورقة
<input type="checkbox"/> توش	<input type="checkbox"/> طبعات	<input type="checkbox"/> معجونة	
<input type="checkbox"/> حومرة	<input type="checkbox"/> قصة	<input type="checkbox"/> مقص	

5. ملابس: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (31)

<input type="checkbox"/> بجامة	<input type="checkbox"/> جرار	<input type="checkbox"/> شورت	<input type="checkbox"/> كبوت
<input type="checkbox"/> بلوزة	<input type="checkbox"/> جرساي/ جارسى	<input type="checkbox"/> شتيال	<input type="checkbox"/> كفوف
<input type="checkbox"/> بنطلون	<input type="checkbox"/> جزمة	<input type="checkbox"/> طَظِيَة (قبعة)	<input type="checkbox"/> كلسات
<input type="checkbox"/> بوط	<input type="checkbox"/> جينس	<input type="checkbox"/> فوطة/ تيتول / حفاظة	<input type="checkbox"/> كلسون
<input type="checkbox"/> تانيتس	<input type="checkbox"/> حفاي	<input type="checkbox"/> فستان	<input type="checkbox"/> كندرة
<input type="checkbox"/> ترينينج	<input type="checkbox"/> زر	<input type="checkbox"/> فنييلة / فنييلة	<input type="checkbox"/> مرييلة
<input type="checkbox"/> تتورة	<input type="checkbox"/> شال	<input type="checkbox"/> قنشاط (حزام)	<input type="checkbox"/> هلاهوب
<input type="checkbox"/> جاكيت	<input type="checkbox"/> شحويطة	<input type="checkbox"/> كالكوش	

6 . مأكولات ومشروبات: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (69)

<input type="checkbox"/> بازيلا	<input type="checkbox"/> جاجة (دجاجة)	<input type="checkbox"/> طبيخ	<input type="checkbox"/> ماي (ماء)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

مجدرة	طونا	جينة	پانكيك
مرتديلا	عجة	حليب	بردقان (برتقال)
مشمش	عصير	حمص	بسكوته
ملح	عميرة	خبزة	بطاطا
ملفوف	عنب	خيارة	بطيخ
معدان / داني / دانييلا	فاصوليا	ذرة / تيرس	بمبا
معكرونة	فلفل	رز	بندورة
ملبسة	كرز	زعترا	پوپكورن
ملوخية	كعكة	زيتون	بوطة
مندلينا	كورنفلكس	سكر	بيجلا
منقوشة	كوسا	سلطة	ببلي
موزة	كولا	سمكة	بيضة
نجاصة (اجاصة)	لبان (علكة)	شراب	تشيبس
ورق دولي	لين	شمام	تفاحة
	لبنة	شورية	تلج/تلجة
	لحمة	شوكلاطة	توت
	لخمنيوتة	شوكو	وفي

7. أعضاء الجسم: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (27)

عين	ركبة	فم	ابهام
كتف	سنان (أسنان)	حمامة/ حموشة /حنوش	إجر(رجل)
كوع	شعر	خد	أصبع
لسان	شفاف (شفاه)	دقن (دقن)	اضافر (أظافر)
منخار (أنف)	صباح	دين (أذن)	ايد (يد)
وجه	ضهر(ظهر)	راس	بز/بزوز
	طيز/طزطوز	رقبة	بطن

8. أغراض في البيت: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (50)



مصري (مال)	فنجان	شامبو <input type="checkbox"/>	تلفون
معجونة سنان <input type="checkbox"/>	فوطه <input type="checkbox"/>	شوكه <input type="checkbox"/>	جاط <input type="checkbox"/>
معلقة <input type="checkbox"/>	قنينة <input type="checkbox"/>	شيكل <input type="checkbox"/>	جزدان <input type="checkbox"/>
مفاتيح <input type="checkbox"/>	كباي (كأس) <input type="checkbox"/>	صابون <input type="checkbox"/>	حرام/بطانية <input type="checkbox"/>
مقلاة <input type="checkbox"/>	كاميرا <input type="checkbox"/>	صحن <input type="checkbox"/>	دوا (دواء) <input type="checkbox"/>
مكنسة <input type="checkbox"/>	لامية <input type="checkbox"/>	صندوق <input type="checkbox"/>	راديو <input type="checkbox"/>
ممسحة <input type="checkbox"/>	محارم <input type="checkbox"/>	صينية <input type="checkbox"/>	زباله <input type="checkbox"/>
منشفة <input type="checkbox"/>	مخدة <input type="checkbox"/>	صورة <input type="checkbox"/>	زريعة (أورة) <input type="checkbox"/>
نضارات (نظارات) <input type="checkbox"/>	مرطبان <input type="checkbox"/>	ضو <input type="checkbox"/>	ساعة <input type="checkbox"/>
هوفر / فاكيوم <input type="checkbox"/>	مسجل <input type="checkbox"/>	طنجرة <input type="checkbox"/>	سطل <input type="checkbox"/>
ورق <input type="checkbox"/>	مسمار <input type="checkbox"/>	علبة <input type="checkbox"/>	سكينة <input type="checkbox"/>
	مشط <input type="checkbox"/>	فرشاية (للشعر) <input type="checkbox"/>	سلة <input type="checkbox"/>
	مصاصة <input type="checkbox"/>	فرشاية سنان <input type="checkbox"/>	شاكوش <input type="checkbox"/>

9. أثاث وغرف: الرجاء الإشارة الى الكلمات التي سمعت طفلك يقولها (38)

مجلى <input type="checkbox"/>	صالون <input type="checkbox"/>	حمام <input type="checkbox"/>	أماطية <input type="checkbox"/>
مطبخ <input type="checkbox"/>	طاولة <input type="checkbox"/>	خزانة <input type="checkbox"/>	اوضة (غرفة) النوم <input type="checkbox"/>
مغسلة <input type="checkbox"/>	فرد شعر <input type="checkbox"/>	دخون/صوبا <input type="checkbox"/>	باب <input type="checkbox"/>
ميكروويف <input type="checkbox"/>	فرن <input type="checkbox"/>	درج <input type="checkbox"/>	براد <input type="checkbox"/>
نشافة <input type="checkbox"/>	فريزر <input type="checkbox"/>	دش <input type="checkbox"/>	برنده / بلكون <input type="checkbox"/>
	فديو <input type="checkbox"/>	دقاي <input type="checkbox"/>	بيت خارج/بيت ماي <input type="checkbox"/>
	قفص <input type="checkbox"/>	ريشت (للشباك) <input type="checkbox"/>	تخت <input type="checkbox"/>
	كراج <input type="checkbox"/>	سجادة <input type="checkbox"/>	تريس (للشباك) <input type="checkbox"/>
	كرسي <input type="checkbox"/>	سكلمة <input type="checkbox"/>	تلفزيون <input type="checkbox"/>
	كناي / صوفا <input type="checkbox"/>	سي دي <input type="checkbox"/>	جارور <input type="checkbox"/>
	غسالة <input type="checkbox"/>	شباك <input type="checkbox"/>	جلاي <input type="checkbox"/>

10. أغراض في البيئة المحيطة بالطفل: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (27)

بركة	رصيف	شارع	غيمة
<input type="checkbox"/> بحص/ حزره	<input type="checkbox"/> رمل	<input type="checkbox"/> شتا (شتاء)	<input type="checkbox"/> قمر
<input type="checkbox"/> بولي (رجل تلج)	<input type="checkbox"/> ساحة	<input type="checkbox"/> شجرة	<input type="checkbox"/> مرجيحة
<input type="checkbox"/> تلج	<input type="checkbox"/> سحسيلة	<input type="checkbox"/> شمس	<input type="checkbox"/> نجمة
<input type="checkbox"/> جنينة	<input type="checkbox"/> سطح	<input type="checkbox"/> صخرة	<input type="checkbox"/> نبريش / نبريج
<input type="checkbox"/> حجر	<input type="checkbox"/> سلم	<input type="checkbox"/> عصاي (عصاة)	<input type="checkbox"/> وردة
<input type="checkbox"/> ديشي	<input type="checkbox"/> سما	<input type="checkbox"/> علم	

11. أماكن قد يذهب الطفل إليها: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (24)

<input type="checkbox"/> الألعاب المنفوخة	<input type="checkbox"/> السوق	<input type="checkbox"/> الكنيسة/الجامع	<input type="checkbox"/> برا
<input type="checkbox"/> البركة	<input type="checkbox"/> السيرك	<input type="checkbox"/> المدرسة	<input type="checkbox"/> جنينة الحيوانات
<input type="checkbox"/> البيت	<input type="checkbox"/> السينما	<input type="checkbox"/> المكدونالدز	<input type="checkbox"/> محطة الباص
<input type="checkbox"/> الحضانة/ مشيحتون	<input type="checkbox"/> الشط/البحر	<input type="checkbox"/> النهر	<input type="checkbox"/> محطة البنزين
<input type="checkbox"/> الدكانة	<input type="checkbox"/> الشغل	<input type="checkbox"/> الوادي	<input type="checkbox"/> محل الألعاب
<input type="checkbox"/> الروضة/ الجان	<input type="checkbox"/> الكنيون	<input type="checkbox"/> باي	<input type="checkbox"/> مشوار

12. الأشخاص: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (24)

<input type="checkbox"/> اخوي	<input type="checkbox"/> بيو (طفل)	<input type="checkbox"/> دكتور	<input type="checkbox"/> مرا (أمرأة)
<input type="checkbox"/> اختي	<input type="checkbox"/> بنت	<input type="checkbox"/> زلمي (رجل)	<input type="checkbox"/> معلمة
<input type="checkbox"/> (اسم الحاضنة)	<input type="checkbox"/> بوليس	<input type="checkbox"/> سيدي/سيديو	<input type="checkbox"/> مهرج
<input type="checkbox"/> (اسم الحيوان الاليف)	<input type="checkbox"/> تيتا/ستي	<input type="checkbox"/> عمتي/عمتو	<input type="checkbox"/> نارس
<input type="checkbox"/> (اسم الطفل)	<input type="checkbox"/> خالتي/خالتي	<input type="checkbox"/> عمي/عمو	<input type="checkbox"/> ناس
<input type="checkbox"/> بابا	<input type="checkbox"/> خالي/خالو	<input type="checkbox"/> ماما	<input type="checkbox"/> ولد

13. الرجاء الإشارة إلى الأفعال التي يقولها الطفل بغض النظر عن أي زمن كان (103)

أبتسم	أدهن	أصلح	أقعد	أوقّع/أزيت(اللعبة)
<input type="checkbox"/> أبكي	<input type="checkbox"/> أدوق (أتذوق)	<input type="checkbox"/> أصيِّح/أصرِّخ	<input type="checkbox"/> أكُب	<input type="checkbox"/> أوقّع (عالارض)
<input type="checkbox"/> أبني	<input type="checkbox"/> أرسم	<input type="checkbox"/> أضحك	<input type="checkbox"/> أكتب	<input type="checkbox"/> أوقف
<input type="checkbox"/> أبوس	<input type="checkbox"/> أرقص	<input type="checkbox"/> أضرب	<input type="checkbox"/> أكره/ولا احب/ بحبش	
<input type="checkbox"/> أختبا	<input type="checkbox"/> أركب	<input type="checkbox"/> أضل (بيقى)	<input type="checkbox"/> أكرس	
<input type="checkbox"/> أتزلج	<input type="checkbox"/> أركض	<input type="checkbox"/> أطبخ	<input type="checkbox"/> أكل	
<input type="checkbox"/> أتسحسل	<input type="checkbox"/> أرمي	<input type="checkbox"/> أطربق	<input type="checkbox"/> أكتس	
<input type="checkbox"/> أتصل	<input type="checkbox"/> أزغزغ	<input type="checkbox"/> أطعمي	<input type="checkbox"/> أكتيف	
<input type="checkbox"/> أتعشق	<input type="checkbox"/> أروح (أذهب)	<input type="checkbox"/> أطلب	<input type="checkbox"/> ألاقي	
<input type="checkbox"/> أتمرّج	<input type="checkbox"/> أروِّح (عالبيت)	<input type="checkbox"/> أعبط	<input type="checkbox"/> ألبط	
<input type="checkbox"/> أجي	<input type="checkbox"/> أزقّف	<input type="checkbox"/> أعض	<input type="checkbox"/> أالحس	
<input type="checkbox"/> أجيب	<input type="checkbox"/> أساعد	<input type="checkbox"/> أعطي	<input type="checkbox"/> ألق	
<input type="checkbox"/> أحب	<input type="checkbox"/> أسب	<input type="checkbox"/> أعمل	<input type="checkbox"/> ألعب	
<input type="checkbox"/> أحضّر (أكل)	<input type="checkbox"/> أسبح	<input type="checkbox"/> أعمل حالي(اتظاهر)	<input type="checkbox"/> أمزع	
<input type="checkbox"/> أحضر(تلفاز)	<input type="checkbox"/> أستنا(انتظر)	<input type="checkbox"/> أغسل	<input type="checkbox"/> أمسح	
<input type="checkbox"/> أدق (الباب)	<input type="checkbox"/> أسحب	<input type="checkbox"/> أعطي	<input type="checkbox"/> أمسح(الارض)	
<input type="checkbox"/> أحكي	<input type="checkbox"/> أسرع	<input type="checkbox"/> أغني	<input type="checkbox"/> أمسك	
<input type="checkbox"/> أحمل	<input type="checkbox"/> أسكّر(الباب)	<input type="checkbox"/> أفتح	<input type="checkbox"/> أمشي	
<input type="checkbox"/> أخط	<input type="checkbox"/> أسمع	<input type="checkbox"/> أفرجي	<input type="checkbox"/> أنام	
<input type="checkbox"/> أخبط	<input type="checkbox"/> أسوق	<input type="checkbox"/> أفكّر	<input type="checkbox"/> أنشف	
<input type="checkbox"/> أخذ	<input type="checkbox"/> أشتري	<input type="checkbox"/> أفوت(اللعبة)	<input type="checkbox"/> أنصف	
<input type="checkbox"/> أخربش	<input type="checkbox"/> أشتغل	<input type="checkbox"/> أفوت (عالبيت)	<input type="checkbox"/> أنط (أقفز)	
<input type="checkbox"/> أخلّص	<input type="checkbox"/> أشرب	<input type="checkbox"/> أفيق (أستيقظ)	<input type="checkbox"/> أنفخ	
<input type="checkbox"/> أدفش	<input type="checkbox"/> أشوف	<input type="checkbox"/> أفرا	<input type="checkbox"/> أنقي (يختار)	
<input type="checkbox"/> أدفّر (المس)	<input type="checkbox"/> أصب/أحط (أكل)	<input type="checkbox"/> أفص(شعري/ورقة)	<input type="checkbox"/> أهز	

14. الرجاء الإشارة الى الصفات التي سمعت طفلك يقولها (62)

<input type="checkbox"/> مكسور	<input type="checkbox"/> علقان	<input type="checkbox"/> ثقيل	<input type="checkbox"/> أبيض
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ملان	غامق	تيس/تيوس	أحسن
منيح <input type="checkbox"/>	فاتح <input type="checkbox"/>	جديد <input type="checkbox"/>	أحمر <input type="checkbox"/>
ناشف <input type="checkbox"/>	فاضي <input type="checkbox"/>	جوعان <input type="checkbox"/>	آخر <input type="checkbox"/>
ناعم <input type="checkbox"/>	فايق <input type="checkbox"/>	حلو/حلوة <input type="checkbox"/>	أخضر <input type="checkbox"/>
نايم <input type="checkbox"/>	فقير <input type="checkbox"/>	خايف <input type="checkbox"/>	أزرق <input type="checkbox"/>
نضيف (نظيف) <input type="checkbox"/>	قديم <input type="checkbox"/>	زعلان <input type="checkbox"/>	أسود <input type="checkbox"/>
نعسان <input type="checkbox"/>	قرَف <input type="checkbox"/>	زغير(صغير) <input type="checkbox"/>	أصفر <input type="checkbox"/>
نعش <input type="checkbox"/>	كبير <input type="checkbox"/>	سخن/ حامي <input type="checkbox"/>	أول <input type="checkbox"/>
هادي <input type="checkbox"/>	مبسوط <input type="checkbox"/>	سريع <input type="checkbox"/>	بارد <input type="checkbox"/>
وسخ <input type="checkbox"/>	مجروح <input type="checkbox"/>	شبعان <input type="checkbox"/>	بردقاني (برتقالي) <input type="checkbox"/>
	مدبِق <input type="checkbox"/>	شاطر <input type="checkbox"/>	بردان/سقعان <input type="checkbox"/>
	مريض <input type="checkbox"/>	صعب <input type="checkbox"/>	بضايق (مزعج) <input type="checkbox"/>
	مشاغب <input type="checkbox"/>	طويل <input type="checkbox"/>	بطيء <input type="checkbox"/>
	مش منيح <input type="checkbox"/>	طفران <input type="checkbox"/>	بني <input type="checkbox"/>
	مغرَق/ملان مي <input type="checkbox"/>	عالي <input type="checkbox"/>	بوجَع (مؤلم) <input type="checkbox"/>
	مغَيمي <input type="checkbox"/>	عطشان <input type="checkbox"/>	تعبان <input type="checkbox"/>

15. ألعاب وروتين يومي: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (28)

حبيبي...انا <input type="checkbox"/>	صباح الخير <input type="checkbox"/>	بيني/كوكو <input type="checkbox"/>	اتحمم <input type="checkbox"/>
نعم / آه <input type="checkbox"/>	عشاء <input type="checkbox"/>	باي <input type="checkbox"/>	إجبتلك <input type="checkbox"/>
هياني/هيانوا/ إياني <input type="checkbox"/>	عندي <input type="checkbox"/>	بكفي/ بس / خلص <input type="checkbox"/>	أروح باي <input type="checkbox"/>
هيك / هيكأ (هكذا) <input type="checkbox"/>	غدا <input type="checkbox"/>	تصبح عخير <input type="checkbox"/>	إشي طيب <input type="checkbox"/>
	فطور <input type="checkbox"/>	زَقَف زقف <input type="checkbox"/>	أكل <input type="checkbox"/>
	لا <input type="checkbox"/>	زمبيعة/بيبي/أسير <input type="checkbox"/>	ألو (للتلفون) <input type="checkbox"/>
	محللاه/ محلاتو / واو <input type="checkbox"/>	شخة/كُخا <input type="checkbox"/>	إلي (لي) <input type="checkbox"/>
	مرحبا <input type="checkbox"/>	شكرًا <input type="checkbox"/>	انام نيني <input type="checkbox"/>

16. كلمات تتعلق بالوقت: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (13)

يوم <input type="checkbox"/>	قبل <input type="checkbox"/>	بعد <input type="checkbox"/>	الليل <input type="checkbox"/>	إسأ <input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

الصبح	الليلة	بعدين	كان
<input type="checkbox"/> أظهر	<input type="checkbox"/> اليوم	<input type="checkbox"/> بكرا	<input type="checkbox"/> مبيرح

17. الرجاء الإشارة إلى الأضمانر واسماء الإشارة التي سمعت طفلك يقولها (19)

<input type="checkbox"/> ألك (لك مذكر)	<input type="checkbox"/> إنا (لنا)	<input type="checkbox"/> إحننا(نحن)	<input type="checkbox"/> هذا (هذا)	<input type="checkbox"/> هني (هم)
<input type="checkbox"/> إلك (لك مؤنث)	<input type="checkbox"/> إلهها (لها)	<input type="checkbox"/> انا	<input type="checkbox"/> هداك (ذلك)	<input type="checkbox"/> هوي (هو)
<input type="checkbox"/> إلكو(لكم)	<input type="checkbox"/> إلو (له)	<input type="checkbox"/> إنتو (انتم)	<input type="checkbox"/> هدول (هؤلاء)	<input type="checkbox"/> هبي(هي)
<input type="checkbox"/> إئن /إلهن (لهم)	<input type="checkbox"/> إلي (لي)	<input type="checkbox"/> إنتي (انت)	<input type="checkbox"/> هدوك (اولئك)	

18. الرجاء الإشارة إلى أدوات الاستفهام التي سمعت طفلك يقولها: (8)

<input type="checkbox"/> أي	<input type="checkbox"/> كيف	<input type="checkbox"/> ليش/عشان ايش	<input type="checkbox"/> وين	<input type="checkbox"/> وينتا
<input type="checkbox"/> ايش	<input type="checkbox"/> لمين	<input type="checkbox"/> مين		

19. الرجاء الإشارة إلى أحرف الجر والظروف المختلفة التي سمعت طفلك يقولها (16)

<input type="checkbox"/> بعيد	<input type="checkbox"/> حد/بجانب	<input type="checkbox"/> قدام (أمام)	<input type="checkbox"/> من دون/من غير	<input type="checkbox"/> هون
<input type="checkbox"/> بين	<input type="checkbox"/> فوق	<input type="checkbox"/> قريب	<input type="checkbox"/> هناك	<input type="checkbox"/> ورا
<input type="checkbox"/> تحت	<input type="checkbox"/> في/ب/بقلب	<input type="checkbox"/> مع	<input type="checkbox"/> ل	<input type="checkbox"/> من
		<input type="checkbox"/> على		

20. أَل التعريف / النفي / الكمية: الرجاء الإشارة إلى الكلمات التي سمعت طفلك يقولها (12)

<input type="checkbox"/> ال	<input type="checkbox"/> بطل في/ فيش (لا يوجد)	<input type="checkbox"/> كتير / كومي	<input type="checkbox"/> كمان	<input type="checkbox"/> نفس الشي
<input type="checkbox"/> بدي	<input type="checkbox"/> شوي/نونو	<input type="checkbox"/> كل	<input type="checkbox"/> مش نفس الشي/غير	<input type="checkbox"/> ولا واحد / ولا اشي
<input type="checkbox"/> بديش	<input type="checkbox"/> في			

21. الرجاء الإشارة إلى أدوات الربط التي سمعت طفلك يقولها (6)

<input type="checkbox"/> أو	<input type="checkbox"/> اذا (اذا بشرط)	<input type="checkbox"/> بس (ولكن)	<input type="checkbox"/> لما	<input type="checkbox"/> لأنو/عشان (لأن)
	<input type="checkbox"/> و/كمان (وايضا)			

(ب) كلمات يستعملها الأطفال

الرجاء الإشارة إلى الإجابة الأكثر ملائمة ب X .

غالبًا	أحيانًا	ليس بعد	
			1. هل يتكلم طفلك عن أحداث حدثت في الماضي أو أشخاص غير موجودين أمامه؟ مثلًا: هل يذكر ابنك اسم شخص معين رآه من قبل؟ أو هل يذكر أو يقول كلمة "المهرج" أو "البالون" بعد يوم من حضوره لحفلة معينة؟
			2. هل يتكلم طفلك عن أمور ستحدث في المستقبل؟ على سبيل المثال , هل يقول "مرجحة" إذا علم أنه سوف يذهب الى متنزه ألعاب؟
			3. هل يتكلم طفلك عن أعراض أو أشخاص غير موجودين أمامه؟ مثلًا, هل يسأل أين دميته المفضلة إذا لم تكن أمامه, أو يسأل عن أباه إذا لم يكن بجواره؟
			4. هل يفهم طفلك إذا طلبت منه إحضار شيء غير موجود أمامه؟ مثلًا, هل يذهب إلى غرفته للبحث عن دميته إذا سألته "أين دميتك"؟
			5. هل يمسك أو يشير طفلك إلى عرض معين تابع لشخص غير موجود ويسمي الشخص؟ مثلًا, هل يمسك حذاء الوالد إذا كان والده غير موجود في البيت ويقول "بابا"؟

القسم الثاني: جمل وقواعد اللغة

الرجاء الإشارة إلى الإجابة الأكثر ملائمة لطريقة كلام طفلك الآن ب X .الرجاء الإشارة إلى إجابة واحدة فقط.

للتذكير: لا يوجد أي سبب للقلق إذا كان الطفل في هذا الجيل يردّد قسماً صغيراً جداً من الكلمات أو الجمل الموجودة أدناه. لكل طفل وتيرة تطور خاصة به.

1. ماذا يقول ابنك إذا رأى سيارتين / طابنتين؟

- سيارة / طابة سيارتين / طابنتين تتين تتنين
 تتين سيارة / طابة تتنين سيارة / طابة كثير سيارة / طابة كثير سيارات / طابات
 في سيارتين / طابنتين في تتنين سيارة / طابة في تتين سيارة / طابة في تتين سيارات / طابات
 في هون تتين سيارة / طابة في هون سيارتين / طابنتين

2. ماذا يقول ابنك إذا رأى أكثر من سيارة / بالون؟

سيارا / بالون سيارات / بالونات كومي / كوم كثير
كومي سيارا / بالون كثير سيارا / بالون كثير سيارات/ بالونات كومي سيارات/ بالونات
في كثير سيارا/ بالون في كثير سيارات/ بالونات في هون كثير سيارات/ بالونات

3. ماذا يقول ابنك إذا رأى أكثر من طباخ / سائق ؟

طباخ / سواق طباخين / سواقين كومي / كوم كثير
كومي طباخ / سواق كثير طباخ / سواق كثير طباخين / سواقين كومي طباخين / سواقين
في كثير طباخ / سواق في كثير طباخين / سواقين في هون كثير طباخين / سواقين

4. ماذا يقول ابنك إذا رأى أكثر من عصفور / شباك ؟

عصفور / شباك عصفورات / شباقات عصافير/ شبابيك كومي / كوم
كثير كثير عصفور/ شباك كثير عصفورات/ شباقات كثير عصافير/ شبابيك
في كوم عصفور/ شباك في كثير عصفورات/ شباقات شفت كثير عصافير/ شبابيك
في عصفور وكمان عصفور/ في شباك وكمان شباك

5. ماذا يقول ابنك إذا أكل قطعة من الخبز؟

خبزة أكل أكلت بح
أكل خبزة أكلت خبزة خبزة بح أكلت خبزتي
اسمه) أكلت خبزة اسمه) أكل خبزة أكلت خبزة بطل في خبزة أكلتها

6. ماذا يقول ابنك إذا قام طفل آخر بضرب صديقه دودو؟

واوا / ددِّي دودو ضَرَبَ ضربو
 واوا دودو ضَرَبَ دودو ضربو دودو ضربو لدودو
 (اسم الطفل) عمل واوا هو ضربو لدودو

7. ماذا يقول ابنك لاصدقائه اذا رآهم يلعبون بالطايرة من قبل ؟

لِعَب طايرة لِعِبُو لُعِبْتُو
 اَلْعَب اَلْعَبَ طايرة لعبو طايرة انتو اَلْعَب
 انت اَلْعَب طايرة انتو اَلْعَبو طايرة انتو لُعِبْتُو طايرة انتو لُعِبْتُو بالطايرة

8. ماذا يقول ابنك إذا كان يلعب مع صديقه دودو

دودو لِعَب لِعِبْت بَلْعَب
 انا بَلْعَب احنا اَلْعَبو بَلْعَب دودو دودو بَلْعَب
 مُنَلْعَب انا ودودو بَلْعَب مع دودو لُعِبْت مع دودو بَلْعَب انا ودودو

9. ماذا يقول ابنك إذا رأى والده يشرب ماء؟

بابا مي شَرِب بِشْرَب
 بابا مي شَرِب بابا بابا بِشْرَب بابا اَشْرَب
 بِشْرَب مي شَرِب بابا مي بابا اَشْرَب مي بابا عم بِشْرَب مي

10. ماذا يقول ابنك إذا رأى والدته تحضر الغداء؟

ماما أُنْبِخ طَبِيخ بُنْطَبِخ
ماما أَكِل ماما بُنْطَبِخ ماما طَبِيخ ماما أَطْبِخ
ماما بُنْطَبِخ أَكِل ماما بُتَعْمَل أَكِل ماما أَكِل إِلِي

11. ماذا يقول ابنك إذا رأى اطفال تلعب؟

اولاد إَلْعَب لَعِبُو بَلْعِبُو
لَعِب وِلْد لَعِبُو الْاَوْلَاد بَلْعِبُو الْاَوْلَاد
لَعِب كَوْم وِلْد عَم بَلْعِبُو الْاَوْلَاد لَعِبُو الْاَوْلَاد بِالطَّابَةِ فِي اَوْلَاد بَلْعِبُو

12. ماذا يقول ابنك إذا اراد الذهاب الى الدكان؟

دكانة رُوح أُرُوح بَاي
رَاح دكانة رُوح دكاني أُرُوح دكاني رُوح بَاي
بَدِي دكانة بَاي بَدِي رُوح دكاني بَدِي أُرُوح دكاني بَدِي أُرُوح عَالِدِكَانَةِ

13. ماذا يقول ابنك إذا اراد الذهاب الى مكان ما معك - مثلاً الى الالعب؟

العب رُوح أُرُوح نُرُوح
رَاح العَاب رُوح العَاب أُرُوح العَاب نُرُوح العَاب
بَدِي نُرُوح اَنَا وَايَاكِي بَدِي رُوح العَاب بَدِي أُرُوح العَاب بَدِي نُرُوح عَالِلِالعَاب

14. ماذا يقول ابنك إذا أراد ان يسأل صديقته الى اين ذاهبة؟

- | | | | |
|------------------------------------|---|--|---|
| <input type="checkbox"/> العاب | <input type="checkbox"/> روجي | <input type="checkbox"/> تروح | <input type="checkbox"/> تروحي |
| <input type="checkbox"/> روح العاب | <input type="checkbox"/> روجي العاب | <input type="checkbox"/> تروح العاب | <input type="checkbox"/> تروحي العاب |
| <input type="checkbox"/> بدك العاب | <input type="checkbox"/> بدك روجي العاب | <input type="checkbox"/> بدك تروحي العاب | <input type="checkbox"/> بدك تروحي عالالعاب |

15. ماذا يقول ابنك إذا أراد الحصول على لعبة موجودة على الرف؟

- | | | | |
|---|--|---|--|
| <input type="checkbox"/> هدا | <input type="checkbox"/> فوق | <input type="checkbox"/> لعبة | <input type="checkbox"/> اعطيني |
| <input type="checkbox"/> بدي لعبة | <input type="checkbox"/> اعطيني اللعبة | <input type="checkbox"/> بدي اللعبة | <input type="checkbox"/> بدي لعبتي |
| <input type="checkbox"/> بدي لعبة كبيرة | <input type="checkbox"/> أعطيني لعبة فوق | <input type="checkbox"/> أعطيني لعبة رف | <input type="checkbox"/> بدي اللعبة الرف |

16. ماذا يقول ابنك إذا أراد ان يطلب منك أن تفعلي شيئاً - أن تشربي انت الماء مثلاً

- | | | | |
|---------------------------------------|--|---------------------------------------|--|
| <input type="checkbox"/> مي | <input type="checkbox"/> ماما | <input type="checkbox"/> تشرب | <input type="checkbox"/> إشربي |
| <input type="checkbox"/> ماما مي | <input type="checkbox"/> ماما تشرب | <input type="checkbox"/> ماما إشربي | <input type="checkbox"/> اشرب مي |
| <input type="checkbox"/> ماما تشرب مي | <input type="checkbox"/> ماما إشربي مي | <input type="checkbox"/> ماما إشرب مي | <input type="checkbox"/> ماما عطشانة إشربي |

17. ماذا يقول ابنك إذا لم يرغب ان يأكل؟

- | | | | |
|--|-------------------------------------|---|--|
| <input type="checkbox"/> لأ | <input type="checkbox"/> بديش | <input type="checkbox"/> خلص | <input type="checkbox"/> بكفي |
| <input type="checkbox"/> لأ خبزة | <input type="checkbox"/> بديش خبزة | <input type="checkbox"/> بديش آكل | <input type="checkbox"/> بطلّ بدي |
| <input type="checkbox"/> بطلّ بدي خبزة | <input type="checkbox"/> انا لأ آكل | <input type="checkbox"/> بديش آكل شعبان/ة | <input type="checkbox"/> بديش آكل خبزة |

18. ماذا يقول ابنك إذا لم يأكل خبزته؟

- | | | | |
|--|-------------------------------------|---|---|
| <input type="checkbox"/> لأ | <input type="checkbox"/> بديش | <input type="checkbox"/> خلص | <input type="checkbox"/> مأكلتش |
| <input type="checkbox"/> لا خبزة | <input type="checkbox"/> لا آكل | <input type="checkbox"/> ولا اكلت | <input type="checkbox"/> مأكلتش الخبزة |
| <input type="checkbox"/> ولا اكلت خبزة | <input type="checkbox"/> انا لا آكل | <input type="checkbox"/> مأكلتش شبعان/ة | <input type="checkbox"/> مأكلتش الخبزة مش جوعان/ة |

19. ماذا يقول ابنك عن سيارة والده؟

- | | | | |
|---|---|---|--|
| <input type="checkbox"/> بابا | <input type="checkbox"/> سيارة | <input type="checkbox"/> سيارتنا | <input type="checkbox"/> سيارة بابا |
| <input type="checkbox"/> بابا سيارة | <input type="checkbox"/> سيارت بابا | <input type="checkbox"/> سيارة للبابا | <input type="checkbox"/> سيارتو للبابا |
| <input type="checkbox"/> هاي سيارة بابا | <input type="checkbox"/> اياها سيارة بابا | <input type="checkbox"/> اياها سيارت بابا | <input type="checkbox"/> اياها سيارتو للبابا |

الرجاء كتابة أطول ثلاث جمل سمعت طفلك يقولها في الآونة الاخيرة, تمامًا كما نطقها طفلك.

1. _____

2. _____

3. _____

معلومات عامة عن الطفل والوالدين

تاريخ اليوم: _____

1. معلومات عامة عن الطفل:

- 1.1 اسم الطفل (ممكن استخدام اسم مستعار): _____
- 1.2 مكان الولادة: _____
- 1.3 تاريخ ميلاد الطفل: _____
- 1.4 الجنس: ذكر / أنثى
- 1.5 رقم الطفل بين إخوته (إذا كان البكر, الرجاء كتابة 1, إذا كان طفلك الثاني, الرجاء كتابة 2 الخ): _____
- 1.6 تفاصيل عن الاخوة والاخوات

الاخوة والاخوات	تاريخ الميلاد	ذكر / أنثى
الأخ الأكبر أو الأخت الكبرى		
الأخ الثاني أو الأخت الثانية		
الأخ الثالث أو الأخت الثالثة		
الأخ الرابع أو الأخت الرابعة		
الأخ الخامس أو الأخت الخامسة		

2. تطور الطفل

- 2.1 هل حدثت لأم مشاكل صحية عند الحمل او في الولادة؟ اذا أجبت ب"نعم", الرجاء تحديد ذلك نعم / لا _____
- 2.2 كم كان وزن الطفل عند الولادة؟ _____
- 2.3 بدأ في المشي بجيل: ____ شهرًا
- 2.4 بدأ بنطق كلمة واحدة في جيل: ____ شهرًا
- 2.5 هل بدأ بنطق كلمتين: نعم / لا في جيل ____ شهرًا
- 2.6 هل تشعرين بأنه متأخر في تطور اللغة؟ اذا أجبت ب"نعم", الرجاء تحديد ذلك

نعم / لا

2.7 هل يعاني الطفل من حالة مرضية معينة؟ اذا أجبت ب"نعم", الرجاء تحديد ذلك

نعم / لا

2.8 هل يعاني أو عانى الطفل من

- مرض الزكام في فترات متقاربة نعم / لا
- فقدان السمع نعم / لا
- حساسيات معينة نعم / لا
- التهاب الأذنان في فترات متقاربة نعم / لا

اذا أجبت ب"نعم", الرجاء إحاطة عدد المرات التي أصيب الطفل بها بهذه الالتهابات هذه السنة

مرة مرتين ثلاث مرات أربع مرات خمس مرات آخر

- علاج او عملية خاصة بالأذنين. اذا اجبت ب"نعم", الرجاء تحديد ذلك

نعم / لا

- شيء آخر

2.9 هل يتعرّض الطفل للغة غير اللغة العربية؟ اذا أجبت ب"نعم", الرجاء تحديد ذلك ولكم من الوقت يومياً

نعم / لا

3. معلومات عن الوالدين

3.1 معلومات عن الام

3.1.1 مكان الولادة (المدينة والدولة)

3.1.2 هل تعملين؟ نعم/ لا ما هي المهنة؟

3.1.3 الثقافة

معلومات اضافية	عدد السنوات		
		نعم / لا	تعليم ابتدائي
		نعم / لا	تعليم ثانوي
		نعم / لا	تعليم جامعي
		نعم / لا	تدريب مهني آخر

2.3 معلومات عن الأب

1.2.3 مكان الولادة (المدينة والدولة) _____

2.2.3 هل يعمل؟ نعم/ لا ما هي المهنة؟ _____

3.2.3 الثقافة

معلومات اضافية	عدد السنوات		
		نعم / لا	تعليم ابتدائي
		نعم / لا	تعليم ثانوي
		نعم / لا	تعليم جامعي
		نعم / لا	تدريب مهني آخر

4. صعوبات

الرجاء الإجابة ب"نعم" أو "لا" في كل فراغ في الجدول

أحد أقرباء الأب	أحد أقرباء الأم	الأب	الأم	أخ أو أخت الطفل	
					صعوبات في المدرسة
					صعوبات في القراءة او في الكتابة
					رسوب في إحدى المراحل الدراسية
					صعوبة في فهم الاخر عندما يتكلم
					صعوبة في التعبير عن نفسه عند الكلام (اللفظ، تكوين جمل، ايجاد الكلمة المناسبة)
					نتيجة للصعوبات في النطق واللغة، هل أخذ علاج في النطق واللغة