

# The Role of the Home Literacy Environment and Parent Education in Effecting the Developmental Differences of Phonological Awareness During Early Child Hood

**Eman Ahmed Ahmed Elmesalamy, Fekry Mohamed Hassan El-Ater\***

Department of Psychology, Faculty of Arts, Cairo University, Cairo, Egypt

**Email address:**

emy.elmesalamy123@gmail.com (E. A. A. Elmesalamy), fmalet@gmail.com (F. M. El-Ater)

\*Corresponding author

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**Abstract:** In the current study, the influence of both environmental and cultural factors on developmental differences among children was revealed in the processes of phonological awareness of the Arabic language, in an attempt to shed light on the importance of the cultural context in general. And the role of the family, in particular, in acquiring and developing the child's phonological structure, by studying the role of the home literacy environment and the level of parents' education in making developmental differences for the phonological awareness processes in Egyptian children in early childhood. One hundred Egyptian pre-school children (50 girls and 50 boys aged (3.5-4.5-5.5 years old), (mean age = 4.72) were assessed on the level of phonemic awareness, and the parents also filled out a questionnaire about their educational level And the frequency of engaging in various activities related to literacy at home with their children In addition to controlling both the general and non-verbal intelligence variables. The results indicated that the factors related to the home literacy environment (the linguistic activities of the mother with the child Which include: maternal talkativeness such as story-telling, singing and imagining stories with dolls)–and the reading rate of the parents in partnership with the child) and letter knowledge in addition to the level of mother education as a socio-cultural variable influencing developmental differences in phonological awareness processes for older age groups during early childhood, While the results did not indicate an effect of the factor of teaching the alphabet through the parents and the level of education of the father in the emergence of developmental differences between the age groups of phonological awareness processes.

**Keywords:** Home Literacy Environment, Phonological Awareness Processes, Early Childhood

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## 1. Introduction

The current study aims to study the role of the home literacy environment factors (formal and informal) and the level of Parent's education in development children's phonological awareness in early childhood in an attempt to understand and explain the role of environmental and cultural factors in development the Phonological awareness processes, such as the repetition and complexity of parental child-directed conversations, which enables children to acquire vocabulary knowledge in familiar social contexts (mothers' talk), storytelling, book reading, alphabet recognition, names, sounds, letters and reading words, as variation in input is

contributing The main differences in developmental differences revealed by studies in the linguistic knowledge of vocabulary among children in the early childhood years [24, 50, 32].

The issue of repetition of inputs took several procedural ways in previous studies dealing with early linguistic evolution and phonological awareness. These inputs included the huge amount of exposure to language, the number of minted words [Hoff, 2003], maternal talkativeness, the quality of speech, lexical diversity, and the number of Word patterns and grammatical complexity [22, 23, 37, 2].

A classic milestone in this area is the study by [21], in which they conducted a longitudinal study in which they

followed 42 children for 3 years from 10 months to 3 years of age. This study concluded that children who live in homes of higher socioeconomic class parents hear approximately 32 million more words than children who live in lower socioeconomic families. And the vocabulary volume of children from high socioeconomic levels at the age of 3 years increases at a rate of (1116 words) substantially compared to their peers without the higher socio-economic class at a rate of (525 words).

The studies also revealed the importance of factors related to the home environment as sources of variation in the development of phonological awareness in early childhood. Children from low-income family backgrounds, and parents with relatively limited years of education, usually display lower levels of phonological awareness skills compared to their peers from higher socioeconomic families and parents with higher education levels as well [33, 39, 5, 47, 35].

In other words, children from lower socioeconomic homes make less progress in development phonological awareness than their peers from higher economic levels, even with IQ control [52].

During the last two decades of the beginning of the twenty-first century, studies tended to focus attention on the home language and the literacy environment, and not just the socio-economic level of the family [51]. One classic effort comes from Burgess, Hecht, and Lonigan (2002), who put forward several different conceptions of the Home Literacy Environment (HLE) as an alternative to earlier simplified insights, such as measures of social status or shared reading experiences, in their longitudinal study that targeted Examine the relationships between the home literacy environment, and the early development of literacy and language learning among pre-school children in the age range from 4 to 5 years. Initial conceptions of the home alphabet environment model included the limited environment in both social status and parental education, parental values surrounding alphabet learning such as the number of books in the home, and parents' knowledge of toddlers' alphabet learning resources with an address recognition test. The perception of alphabet intervention was further divided into a passive home alphabet environment, where parenting activities expose children to patterns of the alphabet such as watching a parent read for pleasure or browsing, as opposed to the active home alphabet environment, where parenting behaviors directly engage children in language or alphabet learning activities. The study concluded that the active home language environment is associated with phonological sensitivity and alone explains 9% of the variance [8, 10, 53, 20, 15].

When examining the environmental factors influencing the development of phonological awareness, the socio-economic situation, of course, is of decisive importance. Although the socio-economic situation does not necessarily have a causal contribution to the outcomes of children's language and learning the literacy, it is the variable that has a distinctive and direct impact, along with other variables, in raising the phonological awareness with its common contrast with the alphabet learning variable. The frequency of participatory book-reading, and

parents' leisure-time reading habits predict specific aspects of the sensitivity of phonological awareness, such as the awareness of rhythm, but both variables have a common variance with the socio-economic level [43, 30, 13, 34, 28].

In this context, Walley Suggest that awareness of phonemic units development as a result of restructuring and building the child's linguistic lexicon represented by the growth of his vocabulary, which helps him in the speed of learning the literacy, and then the early rise of his phonological awareness [49].

In this regard, Adams points out that phonological awareness does not development automatically in the first years of a child's life, as children at this stage do not realize the division of sounds into small sound units (phonemes), while their awareness of these sounds is limited by focusing, in the first place, on The meanings of these pronounced sounds, and in the event that they do not realize that the words are a group of sounds that come together to form a word, it will be very difficult for them to benefit from the instructions of the sound, or to understand the principles and rules of the alphabet, resulting in difficulties in reading, and then writing Later [1].

However, phonological awareness can be reached and development in children at this stage through direct teaching, and focused lessons by parents and teachers on sound instructions, beginning with manipulating the first letters of the word, ending with directed reading, which would improve children's phonemic abilities, Those who suffer from a phonological defect or a deficiency in some phonological skills [46].

Hence, the question arises: To what extent do the factors of the home literacy environment and the level of parent education affect the emergence of developmental differences in the processes of phonological awareness among children during early childhood?

## 2. Literature Review

### 2.1. Phonological Awareness

Phonological awareness is defined as the ability to think about and manipulate the sound structure of spoken language [29] phonological awareness could be separated into two types: epilinguistic awareness and metalinguistic awareness. Epilinguistic awareness: consists of a global sensitivity to similarities between speech sounds. Metalinguistic awareness: consists of a conscious awareness of phonological segments within words, normally phonemes. Phonological awareness includes phonemic awareness and its processes [9, p: 913].

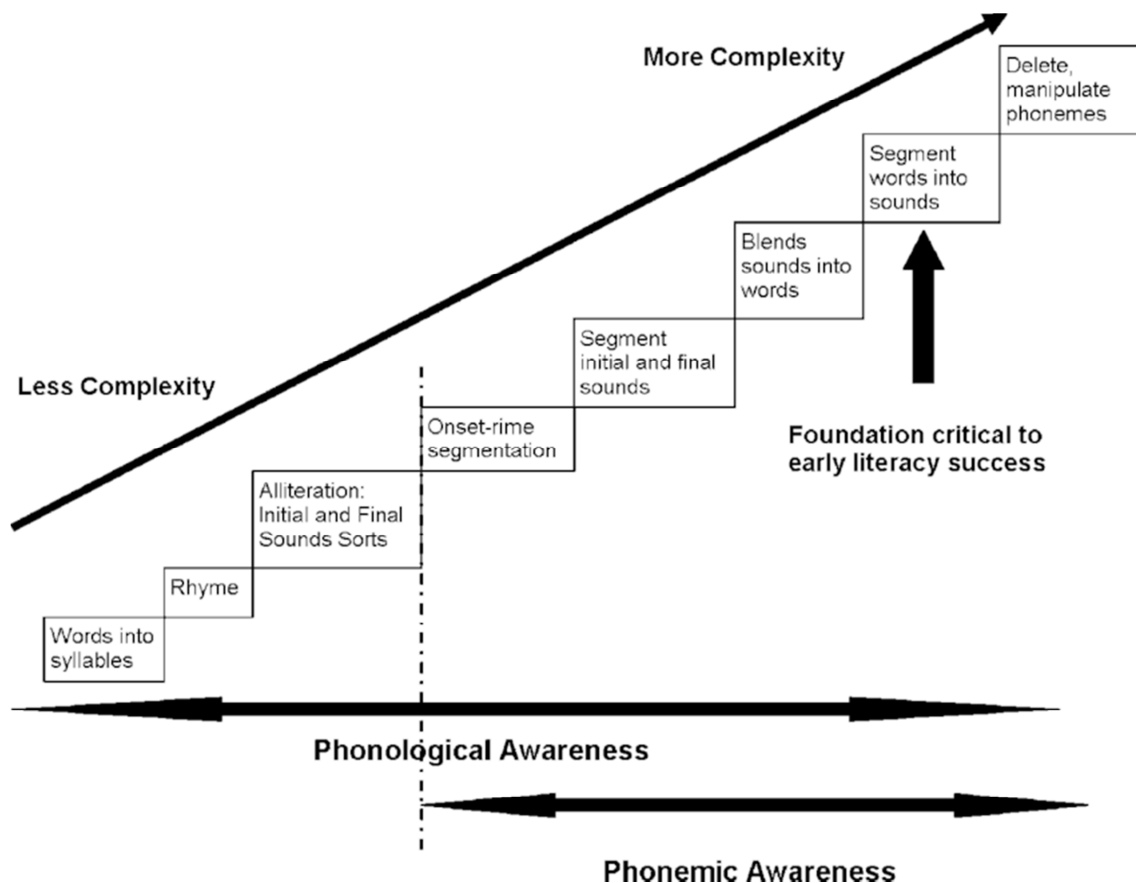
This definition agrees with the definition of "[16], defined phonological awareness as the awareness of the basic units of sound, it is measured in terms of the ability to compare and manipulate the units of speech within words and syllables, and ability to carry out mental operations on these units.

Phonological awareness refers to the general understanding of the sound structure of a spoken language. Due to the confusion between the two concepts of

phonological awareness and phonemic awareness, which has been linked to some studies that dealt with both concepts, we will discuss in detail the concept of phonemic awareness, include in its skills and levels, in an attempt to explain the difference between the two concepts.

Fukuda defines phonemic awareness, a level of phonological awareness including the manipulation of sounds, [19]. In this context, Schuele and Boudreau presented a model that explains the construction of phonological awareness and the difference between it and phonemic

awareness, describing the dimensions and phonemic skills included in each of the two concepts in each of the two concepts., blending, substitution, segmenting and isolating) down to the smallest phoneme unit, the phoneme. While phonological awareness is the most general and comprehensive axis for all levels and phonological skills, starting with the large syllables and ending with the phoneme, and it is the smallest sound unit as shown in the following figure 1 [41].



**Figures 1.** A model showing the difference between the term and processes of phonological awareness and phonemic awareness [41].

#### *The phonological awareness development Models*

Interest in studying the evolutionary approach to the processes and skills of phonemic awareness began with the studies of Bruce (1964), through which he was able to explain the nature of the development of phonological ability in children in early childhood, specially the period between (4 to 5 years), Bruce stated that the phonological development of children in this time period does not necessarily reflect the child's phonological ability to manipulate the structure of the spoken language, while the development of their phonological ability is reflected in the improvement of the standard sensitivity to sound, through which he can perceive the first levels of sound [6, 7].

Children in the early stages are not able to perceive the phonemes and the internal sounds of the word, and therefore do not have the ability to manipulate them, due to their lack of self-monitoring abilities of language (Language awareness)

[7].

The pattern of the evolutionary succession of the processes and skills of phonological awareness, in which the upgrading took place from a total transformation to a partial transformation.

Awareness of the phonological syllable, then awareness of rhyme and alliteration, then awareness of internal sounds (phonemes), then the ability to analyze them, then the ability to produce them until the individual reaches the skill of phonemic awareness, which is the skill that develops primarily as a result of learning to read and write [1].

Many studies indicate that phonological awareness develops and growth along a continuum of linguistic awareness that begins with syllables and moves towards the smallest sound level, which is the phoneme., and the skills of phonological awareness develop in a similar and predictable pattern through the development of language skills in general

in the child. [3, 31, 4, 44, 9]

From all of the above, it is clear that there are several ascending models dealing with the advancement of phonological awareness skills, abilities and processes. Arabic is specific, and therefore the current study may present a different developmental model.

Model the Relationships of Home Literacy Environment with phonological awareness:

Home Literacy model, the home literacy environment consists of two dimensions, each playing different roles in language development and literacy, seneschal and LeFevre (2002), have described these dimensions as informal and formal literacy experiences. Informal literacy experiences are those in which print is present but is not the focus of parent-child interaction. In contrast, formal literacy activities depend on interest in what is provided to the child of books and printed publications such as code-focused and engage children directly with print through activities such as teaching letters, words, and spelling.

Moreover, many studies indicate the importance of the home literacy environment as one of the strongest contributing factors to the acquisition and subsequent development of reading and writing. In addition to increasing the number of vocabulary and learning phonological awareness skills (letter knowledge, word recognition. However, the impact of the home alphabet factors on the child's language skills varies according to the size and type of experiences that the child is exposed to from his parents within his home environment [43, 30, 26, 18, 20].

## 2.2. The Home Literacy Environment: (HLE)

It is all the oral and written experiences that the child is exposed to, formally or informally, in which he participates interactively with his parents, and plays an important role in development his literacy [30, 10].

## 3. Methodology

The study is based on a cross-sectional design, in which behavior or ability in different age groups is compared, in order to see if there are differences in development that appear with higher age levels during early childhood.

### 3.1. Sample

The current study was conducted on a sample of 100 boys and girls of (50 for males, 50 for females) with an mean age of (4.72) and a standard deviation of (.82) and the sample was divided into three groups:

The first group: included (32) boys and girls ranging in age from (3.5) years to 3 years and 9 months: mean age = 3.6 years, SD = .09) where the number of children belonging to parents with post-university education (Master's or Doctorate (10) with (7 for fathers and 3 for mothers), (32) others belonging to parents with university education (14 for fathers, 18 for mothers), and (14) children for parents with pre-university education (secondary) with (7 for fathers, and 7

For mothers). (4) for parents with middle education, and (4) for parents with less than middle education (2 fathers, 2 mothers). The second group: its number was (34) boys and girls ranging in age from 4.5 years to 4 years and 9 months: average age = 4.7, SD = .09), (34) where the number of children belonging to parents with post-university education reached (11) by (8 for fathers, 3 for mothers) and (36) for parents with a university education (15 for fathers, 21 for mothers), (5) for parents with pre-university education (secondary) at a rate of (3 for fathers, 2 for mothers), and (5) for parents with an middle education (3 for fathers and 2 for mothers), and (11) for parents with less than middle education (5 for fathers, and 6 for mothers), the third group: their number reached (34) boys and girls and their ages ranged. From 5.5 years to 5 years 9 months: mean age = 5.6, SD = .07), where the number of children belonging to parents with post-university education reached (8), with (6 for fathers, and 2 for mothers), and (39) children for two parents With a university education, (17 for fathers and 22 for mothers), (1) for a father with pre-university education (secondary), (3) for fathers with intermediate education, and (17) for parents with less than middle education (7 fathers and 10 mothers).

### 3.2. Tools

#### 3.2.1. Phonological Awareness Tool

Smith, Cassady, Bottomley & Popplewel by a group of researchers presented a Standardized Scale of Phonological Awareness (SAPA) in 2007 and the subscales were designed to address some of the gaps and overlaps in the early models (45). Kassady, Smith, and Putman in 2008 developed 14 separate subtasks, including: recognizing and producing rhymes, locating different syllables at the beginning (onset), middle, or end of a word; the link between the phonemes in a word, between the smallest phonemic units, and between the soundness of the word and its impotence; decomposing the word into two phonemes, spelling the words; The new word is known after ellipsis a letter from an existing word, or after substitution a phonetic unit at the beginning, middle or end of the word (12).

The scale included fourteen different phonemic process and skills To measure phonological awareness skills during early and middle childhood, The first eight process were applied only to children, since the study sample was from early childhood stage only, They have been translated into Arabic, and the dimensions were as follows: perceiving rhyme, producing rhyme, recognizing the sound of the first letter common to a number of words (the first phoneme), recognizing the sound of the last letter common to a number Of the last phonemes, recognition of the middle letter sound common to a number of middle phonemes words, phonemic recognition of the word (sentence segmentation), Segmenting of syllables [11].

Basic Instructions Sample Item (s):

1. Rhyme recognition: Rhymes are words that sound the same at the end... Tell me if these words rhyme-قطعة (بطة) . كتاب, ورد
2. Rhyme production: Tell me a word that rhymes with(

and the child has to choose the word that matches it in the end (مقص, مصر, ورق).

3. Recognize the first sound (Beginning sounds): Tell me which one has a different beginning sound (أرنب, أمد, ثعبان).
4. Recognize Middle sound: Tell me which one has a different middle sound (ملح, موز, توت).
5. Recognize ending sound (Tell me which one has a different ending (تفاح, مكتب, تمساح).
6. Segmenting a sentences into words: (Recognize words): (The sentence is given to the child phonetically and the child is asked to divide the sentence into words: (الكلب) (The dog barks) (يُنبح ..... الكلب, يُنبج), (يلعب احمد الكرة ..... يلعب, أحمد, الكرة).
7. Segmenting a word into syllables (Segmenting of syllables): Ask the child to divide the word into its syllables (فلفل ..... فلفل, قل). (Pepper).
8. Splitting a word into phonemes: (Segmenting to phonemes): (Say each sound you hear in the word (Stadium) "ملعب", meaning analyzing it into the phonemes that make up separately. م...ل/ع/ب.

### 3.2.2. The Home Literacy Environment Questionnaire

It includes informal literacy experiences: The parents filled out a questionnaire that included a number of questions about the formal and informal home literacy environment and each dimension included a number of multiple-choice questions.

Formal literacy experiences: Teaching alphabet knowledge through (letter knowledge, pre-reading skills, reading words). In addition to, the child's knowledge of the letter was verified through their test.

In Formal literacy experiences: parent reading rate with child, and Maternal talkativeness: through (narratives stories, reading magazines, and language activities such as singing with the child, pretend talk with dolls).

Table 1 indicates that the reliability coefficient of all the measures were reasonably high.

**Table 1.** Reliability coefficient by retesting the phonological awareness scale Retest reliability (n=45).

Variable	Test-retest reliability (Pearson's r) N=45
Rhyme recognition	0.742
Rhyme production	0.616
Recognize the first sound	0.792
Recognize ending sound	0.604
Recognize Middle sound	0.831
Recognize words	0.854
Segmenting the word into syllable	0.798
split to phonemes	0.880

### Validity

The validity of the developmental changes was calculated and it was found that there were differences between the three age groups in all the variables measured by the study tool in favor of the older age group.

### 3.3. Data Collection

The children were tested individually in a quiet corner of the nursery on phonological awareness (PH) Test, One session lasted between 20 to 30 minutes, and the application of the tasks to the sample took a period ranging from six weeks to two months. And Parents filled out the questionnaire during the same time as their child's testing.

## 4. Results

Two-way Anova were performed to reveal the examine the role of the home literacy environment in effecting developmental differences of phonological awareness processes in Egyptian children. The results are displayed in Tables 2, 3, 4, 5, 6, 7.

**Table 2.** Shows a two-way analysis of variance for differences Between age groups and the father's education level in the child's phonological awareness (n = 100).

Independant variable	Dependant variable	Type \\\ sum of squire	Mean square	Df	F	Sig
Age		71.017	35.507	2	13.131	0
Father's level of education		38.483	7.697	5	2.846	0
Age * Father's level of education	Rhyme recognition	28.807	2.881	10	1.065	0.398
Age		127.718	63.859	2	14.434	0
Father's level of education		101.776	20.355	5	4.601	0.001
Age * Father's level of education	Rhyme application	56.205	5.62	10	1.27	0.261
Age		130.331	65.165	2	121.256	0
Father's level of education		39.526	7.905	5	21.834	0.029
Age * Father's level of education	Recognize the first sound	46.169	4.617	10	2.649	0.138
Age		114.802	57.401	2	10.09	0
Father's level of education		47.984	9.597	5	1.687	0
Age * Father's level of education	Recognize ending sound	39.952	3.995	10	0.702	0.147
Age		23.403	11.701	2	6.146	0.003
Father's level of education		11.458	2.292	5	1.204	0.315
Age * Father's level of education	Recognize Middle sound	31.928	3.193	10	1.677	0.1
Age		136.497	68.248	2	21.491	0
Father's level of education		40.682	8.136	5	2.562	0.033
Age * Father's level of education	Sentence segmentation:	27.802	2.78	10	0.87	0.559
Age		0.858	0.429	2	1.476	0.235
Father's level of education		1.267	0.253	5	0.871	0.504
Age * Father's level of education	Splitting a word into phonemes	3.011	0.301	10	1.036	0.422

Independant variable	Dependant variable	Type \\\ sum of squire	Mean square	Df	F	Sig
Age		106.778	53.389	2	14.013	0
Father's level of education	Segmenting of syllables.	19.499	3.9	5	10.024	0.409
Age * Father's level of education		41.074	4.104	10	1.078	0.389

\*. Correlation is significant at the 0.05 level (2-tailed).

It is clear from Table 2 that there are no differences between the three age groups in the processes of phonological awareness in the presence of different levels of father's education.

**Table 3.** Shows a two-way analysis of variance for differences Between age groups and the mother's education level in the child's phonological awareness (n = 100).

Independant variable	Dependant variable	Type \\\ sum of squire	Mean square	Df	F	Sig
Age		55.312	27.656	2	9.996	0
Mather's level of education	Rhyme recognition	36.376	7.275	5	2.63	0.029
Age * Mather's level of education		19.062	2.723	7	0.984	0.448
Age		101.319	50.659	2	10.54	0
Mather's level of education	Rhyme application	99.871	19.974	5	4.156	0.002
Age * Mather's level of education		27.277	3.897	7	0.811	0.581
Age		121.013	60.506	2	19.273	0
Mather's level of education	Recognize the first sound	51.934	150.387	5	3.309	0.009
Age * Mather's level of education		25.426	3.632	7	1.157	0.336
Age		169.879	84.94	2	15.929	0
Mather's level of education	Recognize ending sound	80.075	16.015	5	3.003	0.015
Age * Mather's level of education		23.227	3.318	7	0.622	0.736
Age		29.787	14.897	2	7.614	0.01
Mather's level of education	Recognize Middle sound	20.079	4.016	5	2.053	0.079
Age * Mather's level of education		16.053	2.293	7	1.172	0.327
Age		108.092	54.046	2	20.481**	0
Mather's level of education	Sentence segmental:	68.984	13.797	5	5.228**	0
Age * Mather's level of education		53.446	7.635	7	2.893**	0.009
Age		6.872	3.436	2	21.361**	0
Mather's level of education	Splitting a word into phonemes	6.017	1.203	5	7.482**	0
Age * Mather's level of education		10.834	1.548	7	9.622**	0
Age		67.251	33.626	2	9.33	0
Mather's level of education	Segmenting of syllables.	26.667	5.333	5	1.48	0.205
Age * Mather's level of education		43.554	6.222	7	1.726	0.114

\*. Correlation is significant at the 0.05 level (2-tailed).

It is evident from Table 3 that there are differences between the three age groups in the processes of word recognition and split to phonemes as processes of phonological awareness among older children (5 years - 5.9) in the presence of a high level of mother's education, where the average interaction effect was Between age (older children) and the mother's education level (post-university) on the process of word recognition as one of the processes of phonological awareness (6 degrees), and with a significance level (0.000), which is the highest average among the other levels of mother's education, while the

average The effect of the interaction between age (older children) and the mother's education level (university) on the process of split to phonemes as one of the processes of phonological awareness (3.84 degrees), and at a level of significance (0.008), which is the highest average among the other levels of mother's education, while these differences did not appear Among the three age groups in some phonological awareness processes represented in (rhythm, rhyming production, first, middle and last sound recognition and word fragmentation to syllable) in the presence of different levels of mother's education.

**Table 4.** Shows a two-way analysis of variance for differences Between age groups and letter knowledge in a child's phonological awareness (n = 100).

Independant variable	Dependant variable	Type \\\ sum of squire	Mean square	Df	F	Sig
Age		37.077	18.538	2	7.766	0.001
Letter Knowledge	Rhyme recognition	39.503	39.503	1	16.548	0
Age * Letter Knowledge		1.285	0.642	2	0.269	0.765
Age		79.569	39.785	2	9.32	0
Letter Knowledge	Rhyme application	133.898	133.898	1	31.368	0
Age * Letter Knowledge		17.815	8.908	2	2.087	0.13
Age		114.057	57.029	2	24.002	0
Letter Knowledge	Recognize the first sound	60.612	60.612	1	25.51	0
Age * Letter Knowledge		59.579	29.789	2	12.538	0
Age		63.256	31.628	2	6.303	0.003
Letter Knowledge	Recognize ending sound	66.336	66.336	1	13.22	0
Age * Letter Knowledge		45.671	22.836	2	4.551	0.013

Independant variable	Dependant variable	Type \\\ sum of squire	Mean square	Df	F	Sig
Age		11.689	5.844	2	2.943	0.058
Letter Knowledge	Recognize Middle sound	10.856	10.856	1	5.467	0.022
Age * Letter Knowledge		7.701	3.85	2	1.939	0.15
Age		70.97	35.485	2	16.226	0
Letter Knowledge	Sentence segmentation:	80.993	80.993	1	37.036	0
Age * Letter Knowledge		63.211	31.605	2	14.452	0
Age		0.286	0.143	2	0.485	0.617
Letter Knowledge	Splitting a word into phonemes	0.326	0.326	1	1.106	0.269
Age * Letter Knowledge		0.286	0.143	2	0.485	0.617
Age		99.962	49.981	2	14.57	0
Letter Knowledge	Segmenting of syllables.	3.257	3.257	1	9.949	0.332
Age * Letter Knowledge		35.246	17.623	2	5.137	0.008

\*. Correlation is significant at the 0.05 level (2-tailed).

It is evident from Table 4 that there are differences between the three age groups in the process of first and last sound recognition, word recognition, and word segmentation as processes of phonological awareness in light of letter knowledge by older children (5 years - 5.9), where the average effect was The interaction between age (older children), and letter knowledge on the process of first sound recognition as one of the processes of phonological awareness (5 degrees), and at a level of significance (0.000), which is the highest average among the younger age groups, while the average effect of the interaction between age (older children), and letter knowledge on the process of recognizing the last sound as one of the processes of phonological awareness (4.34 degrees), with a significance level (0.013),

which is the highest average among the younger age groups, while the average effect of interaction between age (older children) was), and letter knowledge on the process of recognizing words as one of the processes of phonological awareness (4.34 degrees), with a significance level of (0.000), which is the highest average among the younger age groups. p The process of fragmentation of words as one of the processes of phonological awareness (3.47 degrees), with a significance level of (0.008), which is the highest average among the younger age groups, while these differences did not appear between the three age groups in some processes of phonological awareness represented in (rhyme, and production of rhyme), and recognizing the middle sound), in light of the children's knowledge of the letter..

**Table 5.** Shows a two-way analysis of variance for differences Between age groups and the rate at which parents read books with their children in the child's phonological awareness (n = 100).

Independant variable	Dependant variable	Type \\\ sum of squire	Mean square	Df	F	Sig
Age		125.262	62.631	2	20.47	0
Rate of Parent's Reading	Rhyme recognition	4.027	2.013	2	0.658	0.52
Age * Rate of Parent's Reading		2.954	1.477	2	0.483	0.619
Age		225.543	112.771	2	20.374	0
Rate of Parent's Reading	Rhyme application	14.838	7.419	2	1.34	0.267
Age * Rate of Parent's Reading		11.211	5.606	2	1.013	0.367
Age		313.913	156.956	2	45.703	0
Rate of Parent's Reading	Recognize the first sound	17.373	8.686	2	2.529	0.085
Age * Rate of Parent's Reading		10.013	5.007	2	1.458	0.238
Age		264.86	132.43	2	23.262	0
Rate of Parent's Reading	Recognize ending sound	23.633	11.816	2	2.076	0.131
Age * Rate of Parent's Reading		12.49	6.245	2	1.097	0.338
Age		42.521	21.261	2	10.14	0
Rate of Parent's Reading	Recognize Middle sound	3.673	1.836	2	0.876	0.42
Age * Rate of Parent's Reading		3.617	1.809	2	0.863	0.425
Age		240.536	120.268	2	34.841	0
Rate of Parent's Reading	Sentence segmentation:	0.186	0.093	2	0.027	0.973
Age * Rate of Parent's Reading		18.551	9.275	2	2.687	0.073
Age		4.969	2.485	2	9.601	0
Rate of Parent's Reading	Splitting a word into phonemes	0.908	0.454	2	1.755	0.179
Age * Rate of Parent's Reading		2.701	1.35	2	2.219	0.007
Age		150.749	75.375	2	18.867	0
Rate of Parent's Reading	Segmenting of syllables.	1.046	0.523	2	0.131	0.877
Age * Rate of Parent's Reading		1.146	0.573	2	0.143	0.867

\*. Correlation is significant at the 0.05 level (2-tailed).

It is clear from Table 5 that there are differences between the three age groups in the process of recognizing letter sounds as a process of phonological awareness under parents who read books in front of their children.

Where these processes appear in the younger group (3 years - 3.9), and are upgraded in older ages (5 years - 5.9) through parents reading books in front of their children at least twice a month, while these differences did not appear

between the three age groups in some Phonological awareness processes represented in (rhythm production, rhyming production, first, middle, and last sound recognition, word recognition and fragmentation).

**Table 6.** Shows a two-way analysis of variance for differences Between the age groups and the activities that the mother does with her children in the phonological awareness of these children (n = 100).

Independant variable	Dependant variable	Type \\\ sum of squire	Mean square	Df	F	Sig
Age		109.601	54.801	2	20.459	0
Activities	Rhyme recognition	20.166	5.041	4	1.882	0.121
Age * Activities		37.751	5.393	7	2.013	0.062
Age		233.711	116.856	2	21.86	0
Activities	Rhyme application	36.36	9.09	4	1.7	0.157
Age * Activities		37.973	5.425	7	1.015	0.427
Age		268.907	134.453	2	38.543	0
Activities	Recognize the first sound	6.593	1.648	4	0.472	0.756
Age * Activities		45.482	6.497	7	1.863	0.086
Age		270.95	135.475	2	31.505	0
Activities	Recognize ending sound	122.19	30.548	4	7.104	0
Age * Activities		87.496	12.499	7	2.907	0.009
Age		52.939	26.469	2	16.363	0
Activities	Recognize Middle sound	37.961	9.49	4	5.867	0
Age * Activities		22.517	3.217	7	1.989	0.066
Age		250.456	125.228	2	47.138	0
Activities	Sentence segmentation:	50.062	12.515	4	4.781	0.002
Age * Activities		78.194	11.171	7	4.267	0
Age		1.075	0.537	2	1.935	0.151
Activities	Splitting a word into phonemes	1.243	0.311	4	1.119	0.353
Age * Activities		3.138	0.448	7	1.614	0.142
Age		161.644	80.822	2	31.528	0
Activities	Segmenting of syllables.	67.486	16.871	4	6.581	0
Age * Activities		96.097	13.728	7	5.355	0

\*. Correlation is significant at the 0.05 level (2-tailed).

It is clear from Table 6 that there are differences between the three age groups in the process of recognizing the last sound of a word, and recognizing and fragmenting words as a process of phonological awareness in light of the activities that the mother carries out with their children.

Where these processes appear in the younger group (3 years - 3.9), and are upgraded in the older ages (5 years - 5.9)

through the mother's practice of some activities with her children, such as reading picture books, singing, imagining conversations and novels using dolls, While these differences did not appear between the three age groups in some processes of phonological awareness represented in (assonance, production of assonance, and recognition of the first and middle sound).

**Table 7.** Shows a two-way analysis of variance for differences Between age groups and the extent to which parents teach the alphabet to their children in the phonological awareness of these children (n = 100).

Independant variable	Dependant variable	Type \\\ sum of squire	Mean square	Df	F	Sig
Age		68.797	34.398	2	10.948	0
Alpha Knowledge through parents	Rhyme recognition	8.378	2.793	3	0.889	0.45
Age * Alpha Knowledge through parents		1.551	0.388	4	0.123	0.974
Age		162.12	81.06	2	15.673	0
Alpha Knowledge through parents	Rhyme application	53.218	17.739	3	3.43	0.02
Age * Alpha Knowledge through parents		26.141	6.535	4	1.264	0.29
Age		182.654	91.327	2	24.048	0
Alpha Knowledge through parents	Recognize the first sound	0.631	0.21	3	0.055	0.983
Age * Alpha Knowledge through parents		6.261	1.565	4	0.412	0.799
Age		115.257	57.639	2	9.87	0
Alpha Knowledge through parents	Recognize ending sound	23.587	7.862	3	1.347	0.264
Age * Alpha Knowledge through parents		11.525	2.881	4	0.493	0.741
Age		16.488	8.244	2	3.926	0.023
Alpha Knowledge through parents	Recognize Middle sound	5.985	1.995	3	0.95	0.42
Age * Alpha Knowledge through parents		5.082	1.27	4	0.605	0.66
Age		112.55	56.275	2	16.992	0
Alpha Knowledge through parents	Sentence segmentation	23.507	7.836	3	2.366	0.076
Age * Alpha Knowledge through parents		10.914	2.728	4	0.824	0.513
Age		1.387	0.693	2	2.283	0.108
Alpha Knowledge through parents	Splitting a word into phonemes	0.477	0.159	3	0.524	0.667
Age * Alpha Knowledge through parents		0.399	0.1	4	0.328	0.858



Independant variable	Dependant variable	Type \\\ sum of squire	Mean square	Df	F	Sig
Age		124.567	62.283	2	15.71	0
Alpha Knowledge through parents	Segmenting of syllables	3.151	1.050	3	0.265	0.85
Age * Alpha Knowledge through parents		16.313	4.078	4	1.029	0.379

\*. Correlation is significant at the 0.05 level (2-tailed).

It is clear from Table 6 that there are no differences between the three age groups in the processes of phonological awareness in the light of parents teaching their children the alphabet.

## 5. Discussion

As for the first result: the results showed that there were no differences between the three age groups in the processes of phonemic awareness in the presence of different levels of father's education. This result contrasts with the results of a number of studies related to the subject of the study, the results of which indicated the importance of the educational background of parents in general in the development and growth of language, phonemic awareness, and literacy in general. This is due to the exposure of children who belong to parents with low education to less linguistic and educational experiences compared to their counterparts from children belonging to parents with higher education [21, 40, 48]. While I agreed with the results of the study conducted by [27], which did not show an effect of the level of education of Turkish parents in teaching their children the English language, and we can explain the results of the current study for several factors, the first of which is the small age of the sample and the required primitive and simple activities that may not be needed Relatively high levels of education for fathers, unlike the older age stages, and the complexity and difficulty of their activities, which makes the parents' learning level an effective role. Secondly, the reason may also be due to the lack of time the father spends with his children due to his work, and thus this is clearly reflected in the level of his influence in general in his communication And his interaction with his children, which does not reflect the strength of his role including the level of education.

The second result: showed that There are differences between the three age groups in the processes of recognizing words and recognizing letter sounds as processes of phonological awareness in the presence of different levels of mother's education, while these differences did not appear between the three age groups in some processes of phonological awareness represented in (rhythm, rhyming production, first, middle and last sound recognition and word segmentation) in the presence of different levels of maternal education. This result agrees with the results of a number of studies [21, 40, 36, 2, 48], which confirmed the impact of the mother's education level on the development of the child's language, especially in the first years, including Recognizing words and increasing the number of vocabulary and knowledge of the alphabet and letters, and we can explain the results of the current study that the mother's direct impact on the development of the child's language, phonological and

alphabet skills is a natural matter due to the mother spending a longer period with the child and the use of more diverse language activities that depend on The extent of the mother's culture and level of education, the phonemic processes whose development coincides with the development of both linguistic and cognitive processes (such as the ability to divide words into phonemes, perceive phonemes within words, and blending and fragmentation processes depend on direct Teaching methods by parents and their effectiveness and parents' educational competence as an influential factor in the child's acquisition of those skills and awareness of them, in contrast to primary phonological processes, which depend on indirect household alphabetic methods by the mother, Such as rhythmic singing to perceive the rhythm and its production and the first and last sounds of the word, and then simple and indirect language activities do not show the educational differences for mothers. As for the average effect of the interaction between age (older children) and the level of mother's education (post-university) on the word recognition process as one of the processes of phonemic awareness, which is the highest average among other levels of mother's education, this result agrees with the results of previous studies [21, 40, 48, 33, 39, 5] which indicated that Children who belong to parents with a high level of education were exposed to more linguistic and educational experiences and activities in addition to an increase in the number of vocabulary they have compared to their peers of children who belong to parents with a low level of education.

It is clear from Table 4 that there are differences between the three age groups in the process of first and last sound recognition, word recognition, and word segmentation as processes of phonological awareness in light of the letter knowledge by older children (5 years - 5.9), while these did not appear The differences between the three age groups in some phonological awareness processes represented in (rhythm production, rhyming production, and middle sound recognition) in light of children's letter knowledge. This result agrees with most studies related to the subject of the study [43, 28, 5, 9, 30].

The result of the current study is due to several reasons. First: Acquisition of the alphabet and letter knowledge increases with age. The higher the age of the child and the greater his chance of entering the stages of school and preschool (4 and 5 years old), the higher the rules of the alphabet and knowledge of letters for him, and therefore reading and writing skills later. Second, the knowledge of letters is the most influential factor in the phonemic structure and its various processes since it is the basic and first rule based on the recognition (sounds and names) of letters and the phonetic structure of the language. third: letter knowledge is related to conscious awareness of phonemic awareness

processes in particular, which is the most complex level of general phonological construction, which includes processes such as segmentation, blending, and sound manipulation) as opposed to less complex and faster phonemic skills and processes such as rhyming, which depend on home literacy learning activities. Indirect such as rhythmic songs, for example), which explains why letter knowledge learning does not appear with the processes of perception and produces rhyme and middle.

It is clear from Table 5 that there are differences between the three age groups in the process of recognizing the sounds of the letters of the word or (the fragmentation of the word into phonemes) as one of the processes of phonological awareness under the parents who read books with the participation of their children.

Where these processes appear in the younger group (3 years - 3.9), and are upgraded in older ages (5 years - 5.9) through parents reading books with the participation of their children at least twice a month, while these differences did not appear between the three age groups in some of the processes of phonological awareness represented in (rhythm, production of rhyme, first, middle, and last sound recognition, recognition of sentence words and their fragmentation into phonological syllables). This result agrees with the results of a number of studies related to the topic of the current study [43, 14, 25, 38].

We discuss this result from two perspectives: The first is the effect of parent reading with the participation of the child in the presence of differences between the three age groups, as reading with the participation of the child is one of the factors that contribute effectively to the coding process (It is associating the sound with the letter encoded for it) and it is the basic process through which the child realizes the ability to analyze and segment the spoken and written word into its component phonemes in the case of its pronunciation or into letters in the case of writing. As for the second view, which is, there are no differences between groups in the processes of rhyme, the Rhyme application, the recognition of the first, middle, and last sound, and the recognition of the words of the sentence and its fragmentation into phonological syllables in the presence of the factor of reading the parents with the child, it may be due to the dependence of these processes on interaction with phonological activities more than printed activities.

There are differences between the three age groups in the process of recognizing the last sound of the word, and recognizing the words of the sentence and word fragmentation as one of the processes of phonological awareness in light of the activities carried out by the mother with their children. Where these processes appear in the younger group (3 years - 3.9), and are developmental in the older ages (5 years - 5.9) through the mother's practice of some activities with her children, such as reading picture books, singing, and imagining talking using dolls. This result is in agreement with the results of many studies related to the topic of the current study [24, 50, 32, 34, 28, 5].

We explain this result based on the effectiveness of the

impact of the linguistic activities practiced by the mother with her children, as it is one of the most important factors of the home alphabet environment that effectively affects the acquisition and advancement of the alphabet in the child. Age (two years), which explains its effect in the younger age groups (3 years - 3.9) months due to the mother spending most of the time with the child, which increases the strength, effectiveness and impact of these activities.

Second: It includes its impact on a larger number of processes. Studies have indicated that maternal talkativeness affects both linguistic and cognitive processes as well, maternal talkativeness (such as telling stories and novels and imagining them with dolls, and reading printed stories helps the growth of cognitive and vocal representation processes as well as increases the outcome of vocabulary. They have in addition to a connection with the skills of phonological awareness, as for the interpretation of the result related to the absence of differences between the three age groups in some phonological awareness processes represented in (rhythm, production of rhyme, and recognition of the first and middle sound) in light of the activities that the mother carries out with their children. It may be due to the nature of the language used, which did not provide words with the same endings of sounds with regard to the skill of rhyming, or it may be due to the absence of the activities used by the family from the rhythmic exercises of the child that depend on what is known as phonological sensitivity. As for the first and middle sound, it may be due to the adoption of their acquisition of direct household alphabet activities related to (teaching knowledge of the letter, teaching pre-reading skills and the alphabet).

It is clear from Table 7 that there are no differences between the three age groups in the processes of phonological awareness in the light of parents teaching their children the alphabet. This result agrees with some of the results of studies related to the subject of the study [10], whose results revealed a correlation between each of the home literacy environment factors, phonological awareness, and parental education level, but it is a simple correlation versus the effect of the alphabet upgrading results that are applied to children and which its results were significant under the control of the household alphabet variables, the economic and social level, and the parents' education, which we verified by testing the children about the factor of letter knowledge, and there were indeed developmental differences between the groups. See the third result related to the letter knowledge factor see Table 4.

The reason may also be due to another factor, which is that the knowledge of didactic letters is more closely related to the formal methods of teaching and learning in schools, as a basis for methodological, pedagogical and didactic methods. Third, it may be due to a third factor, that the nature of the effect varies according to the nature of each language, and it remains unclear whether HLE and its association with phonological processes differ across languages or not? This result is consistent with the [17] study findings revealing that only the parental behavior factor related to the alphabet was associated with the children's Spanish speaking, language skills and printed character

recognition, while all the household alphabet factors were associated with literacy with English language skills. This is a question that we also recommend investigating as a study [26].

## 6. Conclusion

The results of the current study indicated that the factors related to the literacy environment at home (the linguistic activities of the mother with the child Which include: maternal talkativeness such as story-telling, singing and imagining stories with dolls)–and the reading rate of the parents in partnership with the child) and letter knowledge in addition to the level of mother education as a socio-cultural variable influencing developmental differences in phonological awareness processes for older age groups during early childhood, While the results did not indicate an effect of the factor of teaching the alphabet through the parents and the level of education of the father in the emergence of developmental differences between the age groups of phonological awareness processes.

## 7. Recommendations

The current study sheds light on the importance of the cultural and societal context and its impact on the emergence of developmental differences between children in the processes of phonological awareness, as an attempt to study to clarify the role of social and cultural roots, specifically the role of the family and the level of parental education, in light of the fact that most studies are limited to the role of the economic and social class. The study also relied on the (comparative) cross-section approach, which is one of the developmental methods to compare its results with the results of longitudinal studies related to the subject of the study to reach the optimal model for development with regard to the processes of phonological awareness and the factors affecting it. The study also recommends the necessity of conducting a longitudinal study to test an integrative model that includes each of the cognitive, social, economic and cultural variables in explaining the relationship between each of the home literacy environment, the processes of phonological awareness, working memory and vocabulary knowledge. The study also dealt with the environment and the Arabic language in an attempt to shed light on the effect of the nature and construction of each language in terms of influence.

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