

# Home Literacy Environment, Emergent Literacy and Dyslexia: Implications for Children's Reading Skill.

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**Abstract.** Emergent literacy has been known as a factor responsible for significant results in a child's endeavor to learn how to read. Emergent literacy, however, requires meaningful interactive experiences with print which is initially stimulated at the child's own home, also known as home literacy environment (HLE). By definition, HLE is where children may engage in their initial experiences with the written language. Given the importance of the HLE in literacy development, researches have been conducted regarding typically and atypically developing children. Concerning the atypical group, it has been shown that their literacy practices may differ from those with typical development, which seems to affect those children's emergent literacy skills. Based on the importance of HLE and emergent literacy skills for atypical developing children, this study addressed two aims: a) to map the influence of HLE on emergent literacy skills of dyslexic children through the analysis of recent scientific productions and b) to verify the relevance of Brazilian's studies in this scientific scenario. A mini literature review was conducted by choosing Scopus as the only database platform to be accessed in our research. In general, formal and informal aspects of HLE experiences have been proven to affect the development of emergent literacy skills in dyslexic children or those at risk for developing dyslexia. Moreover, this subject still seems to be little investigated in Brazil, indicating the existence of a gap in the development of research that relates HLE and atypical developing children, such as dyslexic ones.

**Keywords.** Home Literacy Environment, Dyslexia, Emergent Literacy, Reading Skill.

## 1. Introduction

Emergent literacy has been known as an important factor responsible for significant results in a child's endeavor to learn how to read. It is related to the child's participation in literacy practices before they become readers, from birth to about five years of age. Those literacy practices are noticed in a parent-child shared storybook reading occasion, a pretending to write moment, engaging in oral wordplay (e.g., singing songs rhyming), among others [1]. As a consequence, the development of literacy skills is facilitated, for example, by the time a child gets to know the name of the alphabet letters, understands print concepts (e.g. reading direction), and develops the capacity to manipulate units of the speech sound [2], except for the phonemic awareness which needs to be formally taught differently from the other phonological awareness units [3].

As previously observed, the literacy skills implicated in the emergent literacy requires meaningful interactive experiences with print. A way to ensure that stimulation is to engage children

with interactions in an environmental print [2], and the very first place it usually happens is at the child's own home [4].

By definition, home literacy environment (HLE) is a place where children may engage in their initial experiences with the written language [5][6]. Extending that definition, HLE encapsulates informal and formal literacy experiences. The informal one consists of activities related to the message contained in the print: the interpretations raised in a shared storybook reading. On the other hand, the formal literacy experience encompasses activities focused on the print per se, the parent teaching of letter-forms, letter-names, and other language features to the child [4]. It is relevant to mention that both literacy experiences in a HLE serve as measures to predict reading success [7]. Besides, the family's socioeconomic status (SES) also performs as an extra HLE predictor, although it has not been considered as effective as the previous two measures [8].

Given the importance of the HLE in literacy development, researches have been conducted

regarding children with typical development [9] as well as those with developmental disabilities [10]. It has been shown, however, that the literacy practices with atypical developing children are different from those with typical development due to factors such as parents' level of stress [11], which seems to affect these children's HLE print experience, and, consequently, their emergent literacy skills.

Dyslexic children's literacy constraints could be used to illustrate how an atypical development can be overcome. As stated by cognitive and neuroscientists, dyslexic kids are affected by the inefficient ability to connect visual and phonological processes [12], making learning to read difficult since these processes are fundamental for writing decoding [13]. Despite this adverse condition of dyslexia, learning to read is not impossible. With appropriate professional intervention dyslexic subjects can learn to read [12][13].

However, the following question remains: what about the influence of HLE on dyslexic children? Even if it is not a formal professional intervention, could HLE affect dyslexic children's emergent literacy skills development positively?

Based on the importance of HLE and its possible different impact on atypical developing children, this study addressed two aims: a) to map the influence of the home literacy environment on emergent literacy skills of dyslexic children through the analysis of recent scientific productions and b) to verify the relevance of Brazilian studies in this scientific scenario.

## 2. Methodology

A mini literature review was conducted by choosing Scopus as the only database platform in our research. After the selection of the database, a total of 408 publications were found based on the keyword "home literacy environment." A three-step data refinement was performed to find a more accurate result. Firstly, more recent papers published between 2013-2023 were selected. Secondly, the title, abstract, and or keywords that did not contain the term "dyslexia" or derived words (e.g., dyslexic) were discarded. Finally, papers focusing primarily on foreign language acquisition/learning or those which evaded the discussion relating dyslexia and home literacy environment were also excluded.

Based on the inclusion criteria previously listed, an amount of eleven papers were found. The results of the analysis of those findings are discussed in the following section.

## 3) Literature review

The sample of eleven papers was analyzed to accomplish the aims of the present work. The analysis results are presented in two subsequent

subsections.

### 3.1 HLE influence on dyslexic's emergent literacy skills

To map the influence of HLE on emergent literacy skills of dyslexic children, three HLE components (or measures) were taken into consideration during the analysis of the literature review. These HLE components were reported in the introduction of this article as the formal and informal literacy experiences alongside with the parents' SES.

Regarding the formal and informal aspects of HLE experiences, both contribute to children's reading development [14][15][9], although each of these HLE aspects helped in the development of different literacy skills.

In the matter of the formal HLE experiences, it can explain risk-developing dyslexia and dyslexic children's literacy outcomes. Research findings indicate that parents' reading instruction was associated with emerging literacy skills learning, such as the letter-name [16]. However, parents' reading instruction was found to be connected to parental reading skills and stress-level, which were factors that impacted reading instruction quality. For instance, a family's low-stress level reverberates in a quiet reading moment. This attitude affected kids positively in relation to their self-regulation, allowing them to retain more attention in reading activities [17].

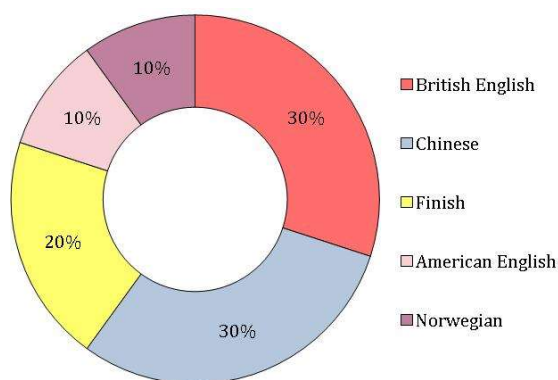
When it comes to the informal HLE experiences, the data set indicates that it is associated with dyslexic children's oral language development and vocabulary learning, with implications in reading motivation and comprehension [16][18][19]. Furthermore, oral language practice can facilitate the development of phonological awareness due to the recurrent contact children have with books containing rhyme and alliteration, which in turn benefit children's future phonemic awareness development [9].

Although it has limitations regarding its impact in HLE contexts when compared with other HLE components, parents' SES has its relevance in dyslexic children's reading attainment [17]. Actually, a combination of different factors defines SES by exerting influence on it, impacting, as a consequence, on dyslexic children's emergent literacy [20]. Some of the factors are: informal HLE experiences [14], parents' education/literacy level [19], parental occupation and family income [20]. From all previously listed factors, the maternal education is a relevant risk-developing dyslexia and dyslexic children's emergent literacy predictor in some of the analyzed papers [21][20][22]. For instance, the higher the level of education and language skills, the more mothers tended to support the basic understanding of unfamiliar books to children. In other words, mothers tended to be more

concrete (e.g. by labeling pictures, describing objects, characters and actions, and asking literal comprehension questions) when explaining stories related to unfamiliar and less concrete books, or they tended to be more abstract when these books were familiar to her children [23].

### 3.2 Brazilian studies on HLE and dyslexia

To verify the participation of Brazil in the scientific productions about HLE and dyslexia, the participants' language in each paper was quantified. Figure 01 depicts this quantification, except for one paper which conducted a systematic literature review [20] on the mentioned topic.



**Fig. 1** - No. of research participant's language occurrences.

Based on the language occurrences portrayed in Fig. 01, British English [9][17][23] and Chinese [18][19][21] led the number of research published in the last ten years (2013-2023), respectively followed by Finnish [16][15], American English [14], and Norwegian [22]. Brazilian Portuguese did not appear among those listed languages. That lack of research on the connection between HLE and dyslexia might indicate the existence of a research production gap.

### 4) Conclusion

Since we carried out a literature review limited to scientific articles found on the Scopus platform, generalizations about the findings in this work need to be taken with caution.

Additionally, the HLE appears to impact the emergent literacy skills of risk-developing dyslexia and dyslexic children. Both formal and informal measures of print experiences and the SES context seem to affect, to a greater or lesser extent, those children's emerging literacy skills, such as phonological awareness and letter-knowledge.

Finally, the data collection for this research demonstrated that Brazil still seems to lack investigations into the relationship between HLE and risk-developing dyslexia and dyslexic children. On the other hand, it portrays how significant future research on that subject can be fruitful for the

Brazilian scientific field and for children suffering from reading difficulties due to dyslexia.

### 5) Acknowledgement

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