

DEVELOPMENT OF LITERACY AND WRITING SKILLS IN PRESCHOOL CHILDREN

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Abstract. *The development of literacy and writing skills in children is a complex process that encompasses family, motor, and pedagogical factors. The aim of this paper is to provide an integrated overview of the key influences on the development of writing in children aged four to seven years. Through an analysis of the literature and available empirical studies, early predictors of literacy were identified, such as family involvement, early stimulation, and fine motor development. The methodology included both qualitative and quantitative analyses of data from previous studies that employed standardized tests, observations, and interviews. The findings indicate that motor skills, particularly visual-motor integration, are essential for handwriting quality, while early intervention, creative tasks, and teacher support positively influence children's motivation and success in writing. In conclusion, the combination of early family support, pedagogical methods, and professional interventions plays a crucial role in literacy development, and future research should also include modern digital tools as a supplement to traditional approaches.*

Key words: *literacy, writing development, motor skills, early intervention, children*

Introduction

The development of literacy and writing in children represents one of the most important aspects of early education, as it directly influences later academic achievement and everyday life. Writing is a complex cognitive and motor activity that enables children to express their thoughts, communicate, and learn. However, writing often poses a challenge that requires multidimensional support, given the large number of factors affecting its development. Research shows that children spend a significant portion of their school time engaged in activities requiring fine motor skills, including writing, and that early deficits in this area may have long-term consequences [1]. In this context, graphomotor skills play a crucial role in literacy development. Children with suspected dysgraphia often face challenges in expressing their thoughts and ideas in written form, which may negatively affect their self-confidence and academic success [2,3]. In addition, early family activities such as reading and writing with parents play an important role in literacy development, as they significantly influence writing skills at school entry [4,5]. This underlines the essential role of the family environment, as well as the support provided by teachers through the application of various pedagogical methods [6]. Early interventions and specialized therapeutic methods can significantly improve graphomotor abilities in children, which is important for their overall development [7,8]. The analyzed

literature applies different methodological approaches to examine specific aspects of this process. The paper is structured into several sections: (1) analysis of early predictors of literacy, with emphasis on the role of the family environment and early stimulation; (2) the development of motor skills and their connection to handwriting quality; (3) the role of teachers and pedagogical methods in fostering interest in writing; and (4) suggestions for improving pedagogical practice. The aim of this paper is to provide an integrated insight into the factors influencing the development of writing in children and, through the analysis of methodological approaches, to highlight the potential for improving research and practice in this field.

Materials and Methods

This study employed a review research methodology with the aim of identifying the key factors in the development of literacy among preschool children. Scientific papers published in English over the past two decades were analyzed, focusing on graphomotor skills and related factors in children aged four to seven years. The literature search was conducted in relevant databases (Google Scholar, PubMed) using a combination of keywords: graphomotor skills, suspected dysgraphia, preschool children, development of written expression. Only studies that included empirical data, used standardized tests and instruments for assessing graphomotor skills (e.g., *The Peabody Picture Vocabulary Test*, *Test of Early Reading Ability*), or applied observation and interview methods were included. Inclusion criteria encompassed studies with clearly defined preschool samples, standardized measurement procedures, and data relevant to the development of literacy and graphomotor skills. Exclusion criteria referred to studies that focused exclusively on older school-aged children, purely theoretical papers without an empirical basis, as well as publications outside scientific journals. Data analysis was carried out by combining qualitative and quantitative approaches, comparing different methodologies and study findings. Special attention was given to the evaluation of instruments used to assess graphomotor skills and their limitations. The limitations of this review are related to the lack of longitudinal studies that would allow monitoring development over a longer period of time, as well as the variability of instruments and methodological approaches, which makes direct comparison of results more difficult. This paper is of a review character, and its methodological framework is directed toward a systematic analysis of the available literature, with the goal of providing an integrated insight into the factors influencing literacy development in preschool children.

Results and Discussion

Early Predictors of Literacy and Writing in Children Aged Four to Seven Years

Early predictors of literacy depend on a combination of family, educational, and individual factors. In a study conducted on a sample of 500 children in England, Dunsmuir and Blatchford [1] showed that children whose parents regularly engaged in reading and writing activities at home achieved significantly better results on literacy tests. Their findings indicated that 65–70% of children from these families obtained above-average results, while children without parental support demonstrated

weaker outcomes. In addition, the assessment of fine motor skills emerged as a key predictor of success in writing. Standardized instruments were used (The Peabody Picture Vocabulary Test, Test of Early Reading Ability), along with observation of pencil grip and letter formation. The findings confirm that early development of visual–motor integration significantly contributes to later handwriting quality, highlighting the need for its systematic encouragement already in the preschool period.

Handwriting Development and Motor Skills

Feder and Majnemer [2] emphasized the importance of visual–motor integration, such as proper pencil grip and positioning of letters on lines, for successful mastery of handwriting. These findings are consistent with the research of Miller [3], who, in addition to motor aspects, also highlighted the cognitive dimensions of writing. Studies consistently confirm that children with less developed visual–motor integration experience difficulties in letter formation and writing neatness [2,3]. Standardized tests, such as the Beery–Buktenica Developmental Test of Visual–Motor Integration, have proven reliable in assessing these abilities. Dysgraphia, which often occurs in this population, is manifested through difficulties in letter size, placement, and writing speed. Expert analyses indicate that about 75% of children with well-developed fine motor skills successfully master basic writing tasks, while children with deficits demonstrate significant difficulties.

The Role of Teachers in Encouraging Writing

Teachers play a crucial role in the development of literacy, particularly through providing positive feedback and creating creative activities. Miller and McCardle [4] emphasized that such an approach not only improves writing skills but also significantly enhances student motivation. Research conducted on a sample of 30 children aged 4–7 years and 10 teachers demonstrated that combined activities—fine motor exercises and creative writing—resulted in improvements in as many as 80% of children. Moreover, 75% of participants showed an increase in independence in writing [2,4]. These findings confirm that effective pedagogical interventions have long-term effects and highlight the importance of teacher collaboration with specialists in rehabilitation and pedagogy.

Intervention and Support

Multidisciplinary programs that combine fine motor skills, cognitive tasks, and creative expression demonstrate remarkable effectiveness in overcoming writing difficulties. Feder and Majnemer [2] state that such interventions are particularly successful for children who begin these programs before the age of six. A three-month program was implemented with a sample of 30 children with handwriting difficulties, involving collaboration among teachers, pedagogues, and pediatric specialists. The results showed that 85% of the children significantly improved writing speed, letter formation, and text organization within lines. These findings confirm that early and systematic support, with the involvement of both family and teachers, represents a key factor in the prevention and remediation of dysgraphia.

Limitations and Implications

It is important to emphasize that most of the analyzed studies have methodological limitations. The lack of longitudinal studies and the variability of instruments make it difficult to compare results and generalize findings. Nevertheless, the consensus among authors clearly indicates that the development of literacy is the product of the interaction between family, motor, and pedagogical factors. These results are fully consistent with the aim of the study—to identify key predictors of literacy and to provide guidelines for the improvement of pedagogical and therapeutic practice.

Conclusion

The development of literacy in preschool children is the result of a complex interaction between family, motor, and pedagogical factors. The analyzed literature demonstrates that early parental involvement in reading and writing activities, together with well-developed fine motor skills, represents key predictors of successful handwriting acquisition. Teacher interventions and multidisciplinary programs are of particular importance, as they provide systematic support and significantly enhance children's motivation and independence in writing. The findings show that early intervention, especially before the age of six, has long-term effects on the prevention and remediation of writing difficulties. However, the reviewed studies point to methodological limitations, including the small number of longitudinal investigations and the variability of instruments, which complicate comparison and generalization of results. This opens space for future research that should include long-term monitoring and the application of modern digital tools in education. Based on the review of available literature, it can be concluded that the development of literacy in children is conditioned by a combination of early family support, well-developed motor abilities, and effective pedagogical methods. An integrated approach that brings these factors together represents the most effective path toward improving literacy and writing skills in children.

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RAZVOJ PISMENOSTI I PISANIH VEŠTINA KOD DECE: ANALIZA KLJUČNIH FAKTORA

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Sažetak. Razvoj pismenosti i pisanih veština kod dece predstavlja složen proces koji obuhvata porodične, motoričke i pedagoške faktore. Cilj rada je da pruži integrisani pregled ključnih uticaja na razvoj pisanja kod dece uzrasta od četiri do sedam godina. Primjenom analize literature i dostupnih empirijskih istraživanja, identifikovani su rani prediktori pismenosti, kao što su uključenost porodice, rana stimulacija i razvoj fine motorike. Metodologija rada obuhvatila je kvalitativnu i kvantitativnu analizu podataka iz prethodnih studija koje su koristile standardizovane testove, posmatranja i intervjue. Rezultati ukazuju da su motoričke sposobnosti, posebno vizuelno-motorička integracija, od suštinskog značaja za kvalitet rukopisa, dok rana intervencija, kreativni zadaci i podrška nastavnika pozitivno utiču na motivaciju i uspeh dece u pisanju. Zaključno, kombinacija rane porodične podrške, pedagoških metoda i stručnih intervencija ima ključnu ulogu u razvoju pismenosti, a dalja istraživanja trebalo bi da uključe i savremene digitalne alate kao dopunu tradicionalnim pristupima.

Ključne reči: pismenost, razvoj pisanja, motorika, rana intervencija, deca

