



(RESEARCH ARTICLE)



Views and experiences of health visitors on an early literacy promotion intervention

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World Journal of Advanced Research and Reviews, 2024, 23(01), 2999–3012

Publication history: Received on 18 June 2024; revised on 28 July 2024; accepted on 30 July 2024

Article DOI: <https://doi.org/10.30574/wjarr.2024.23.1.2299>

Abstract

Background: The advantages of early literacy activities in promoting infant and child development have been well documented in the literature as well as the effectiveness of relevant interventions implemented by health professionals. Yet, data on the perceptions and attitudes of primary health care providers about the implementation process of such interventions remain scarce.

Objective: The aim of this qualitative study was to explore the experiences and views of health visitors (n=13) in applying an early literacy promotion intervention during their practice in primary health settings.

Methods: Data were collected through questionnaires with open ended questions and analyzed through thematic analysis.

Results: Findings showed that parents welcomed the advice and were willing to introduce literacy-oriented activities with their children in their daily family routine. Parents' and children's receptiveness as well as health visitors' own belief in the significance of the intervention were considered factors largely facilitating its implementation and success, despite time constraints and system level shortcomings. Continuing education was recommended both to provide constant support to health visitors, and also sensitize other members of the primary care team for program sustainability and expansion.

Conclusions: The results of this study highlighted the importance of recording health professionals' views, concerns and experiences on applying early literacy promotion so as to receive feedback on ameliorating relevant programs and maximizing their valuable impacts on infant and child development.

Keywords: Early Literacy Promotion; Child Development; Primary Care; Health Visitor; Greece

1. Introduction

1.1. Early literacy promotion and child development

The literacy crisis that affects every country in Europe has significant social, political and economic consequences [1]. Low literacy skills are associated with poor educational, occupational, socioeconomic, developmental and mental health outcomes [2], while a rich early language environment and parent support and education on introducing literacy oriented activities with their children from the first months of life, consist important factors for cultivating children's literacy skills development [3,4].

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The advantages of promoting early literacy have been well documented in the literature [5, 6, 7]. Preschool children's exposure to books has shown to promote the development of vocabulary and listening comprehension skills, which are directly related to children's reading at the age of 8-9 years old [8]. Reading aloud to preschool children has proved to significantly promote receptive vocabulary, working memory, and interactive reading skills in comparison to controls [9], while parental reports of the duration of daily shared reading at 12–24 months positively predict children's academic outcomes at 8–11 years [10]. A recent meta-analysis of book reading intervention studies has shown positive impacts, with small to moderate effects, on both expressive and receptive language outcomes for preschoolers 1-6 years old [7]. Shared book reading provides opportunities for verbal responsiveness and literacy engagement which facilitate early cognitive development [11] and also enhance social-emotional development during preschool period as reflected through reductions in disruptive behaviors, such as hyperactivity [12]. Current neuroimaging studies support an eco-bio-developmental approach as higher reading exposure to 3-5 year old children has shown to be positively correlated with neural activation in brain areas facilitating mental imagery and semantic processing, and supporting narrative comprehension, all foundational elements of emergent literacy [13].

Results have been reproduced in families with low socioeconomic status [14] and in different cultures [15, 16, 20]. This fact is important given that stark differences have been detected in the early childhood language environment between families with high and low socioeconomic status, as children from families in the latter group are exposed to less than triple the number of words per hour compared to the former group, a gap which by the age of three equals to 30 million words [6]. Reading aloud in particular has shown to boost language and cognitive development in young children from low-resource socioeconomic and diverse cultural backgrounds concurrently enhancing parent-child interactions [9]. As shown in the study by Chen et al. [5] on early literacy promotion in families from diverse ethnic and socioeconomic contexts, shared book reading practices at 9 months was significantly associated with infants' receptive and expressive language skills at 18 months. Moreover, early childhood literacy development has a profound influence on the school success and life opportunities of language minority children [17]. Furthermore, the naturally occurring parent-child book reading interactions between parents and toddlers predicts elementary school language and literacy outcomes, including an internal motivation for reading, after controlling for parents' educational level and socioeconomic status [18].

The effectiveness of early literacy promotion interventions implemented by health professionals in the context of well child clinics has been documented in the literature [19-24]. There are many successful initiatives that focus on the crucial role of an early childhood intervention to promote language and literacy skills development and prevent problems of early childhood development and learning [20-22, 24-26, 37]. Results indicate that interventions in the context of primary care aiming at increasing the amount of time parents spend reading interactively with their children yield positive results, with long term impact [21, 27]. Parents of preschoolers participating in early literacy programs show significant increase in literacy orientation activities (reading as favorite and/or regular activity happening at least 3 times per week) in comparison with parents not participating [22]. There is also strong evidence that literacy promotion beginning at the earliest well-child visits may help establish routines that will persist throughout childhood: bedtime reading was strongly associated with reading as a favorite family activity, reading aloud 3 or more times per week and increasing the number of books at home over the first year of life [2, 26].

The home literacy environment that parents establish and the ways in which parents and children interact at home in shared reading activities are critical factors for enhancing young children's development of language and literacy skills [28]. High quality home literacy experiences include both the creation of an environment with multiple opportunities to interact with books embedded in family's daily routine, and emotionally supportive interactions that encourage and facilitate children's engagement; research has shown the affective quality of the reading interaction as the most powerful predictor of children's motivation for reading [29]. Book sharing at bedtime and other language-related routines positively affect family, relational, and social-emotional health; in particular, research associates quality book sharing with promoting secure mother-child attachment, sustaining infant attention, and enhancing social behaviors, improved parenting style, reduced maternal depression and stress levels, enhanced parental sense of competence and self-esteem, and improved parental responsiveness [6, 19].

Primary health professionals are well positioned to deliver reading promotion programs to parents and preschoolers [6, 30]. Activities that can be embedded in everyday clinical practice to promote childhood literacy development from an early age, include educating families on the importance of promoting child's literacy potential, supporting the use of early learning activities, and connecting families to local infant and toddler libraries and early learning programs [20, 22, 30-32]. Recommendations include encouraging both home opportunities, such as motivating parents to start reading aloud activities from birth and sharing books with their children from the earliest stages of life, and community opportunities, such as referring families to local libraries and early years' centers for literacy support and education [6]. Caregivers are encouraged to actively engage the child rather than simple reading the text, and also to employ behaviors

that promote informal and spontaneous reading activities at home which have been associated with higher early oral language skills, in comparison to formal and directly teaching activities [33]. Furthermore, when primary care offices distribute books, educate about the importance of book sharing and demonstrate book sharing in the clinic waiting room, families read more frequently and children improve their speech and language skills [34]. The effects on parent-child interactions about reading practices in families with low socioeconomic status and low maternal education status, support that childhood literacy promotion programs within primary care represent a significant opportunity for enhancing developmental trajectories in at-risk children [14].

Among primary and community health professionals, health visitors can play a fundamental role in promoting early literary activities in the context of their clinical work in advancing family health and supporting families throughout child's early formative years [35]. Although not broadly established and fully incorporated in health visitors' usual clinical practice in all countries, these programs contribute to decreasing social exclusion and inequalities, and promoting infant and child development, all essential aims of health visitors' professional role [36].

Educating and supporting interventionists has been raised as an important element for the success of early literacy promotion programs [37]. However, the relation between the education and training of primary care professionals in early literacy promotion and the application of such initiatives and programs, has scarcely been studied [38], neither have clinicians' perceptions, attitudes, views and experiences on the actual implementation of relevant programs and interventions [39]. Developing understanding in this area could offer unique insights on ways for better supporting clinicians, ameliorating the structure and organization of these programs and maximizing their valuable impacts on infant and child development.

1.2. The present study

Taking into account that literacy is an essential tool for understanding and using knowledge, that people's literacy skills are founded in their early years during rapid synaptic growth, that children raised in book-friendly environments having a head start in life, and the available international data on the crucial role health visitors could play in this context, two educational seminars were organized for the first time in Greece with the purpose to train health visitors in implementing an early literacy promotion program in their clinical practice in primary care, the first of its kind in this country.

The seminars were organized and provided by the non-profit organization *Diavazontas Megalono [Read to grow]* (www.diavazontas.org), which is an interdisciplinary body, founded in 2013 by librarians, educators, health professionals and experts in reading, literacy and literature areas. Its mission is to encourage children's systematic, unprompted engagement in reading and to ensure access to reading materials from an early age; to facilitate the creation of a stimulating reading environment for children in which they will become motivated, engaged and skilled readers. It is the first organization in Greece that has underlined the importance of early literacy promotion, highlighted the relevant surveys and scientific evidence on the importance of early childhood literacy interventions and inspired by similar projects implemented with excellent results in other countries (e.g. Bookstart, Reach Out & Read, Nati per Leggere). Activities focus on families of babies, toddlers and children of preschool age, especially those at risk of poverty or social exclusion (32.2% of children 0-16 years old in Greece, according to EUROSTAT, 2018). Organization's core aims include informing health professionals on the importance of reading for children's linguistic, emotional, cognitive and social development, and encouraging them to participate in early childhood literacy initiatives and also establishing collaborations among health professionals, educators and librarians in order to design and implement reading promotion programs for infants and toddlers.

The educational seminars focused on the benefits of early literacy promotion by exemplifying good practice standards and providing the necessary knowledge and practical advice to trainees on how to educate parents, support and enhance early literacy activities at their working settings during their everyday clinical practice. Health visitors were also trained through an interactive role playing session in order to practice on communicating with parents about the significance of integrating early literacy activities in their daily family routine, on guiding parents about the appropriate books based on child's age and developmental stage and connecting them with a local library. Seminars took place one in the Prefecture of Attiki and one in the Prefecture of Thessaloniki, participation was voluntary and health visitors participated in an-out-of-working-hours' basis.

The aim of the study was to explore the experiences and views of health visitors who participated in the aforementioned educational seminars, on implementing early literacy promotion in the context of their practice with children and families in primary health settings.

2. Materials and methods

2.1. Study design

The study had a qualitative design, aiming to explore the experiences and views of participants on implementing acquired knowledge and skills on early literacy promotion, during their everyday practice in their workplaces in primary care. Qualitative methodology could provide understanding of health visitors' perceptions on various aspects of implementing this intervention.

2.2. Participants and setting

Health visitors working in primary health care settings in the broad area of Attiki and Thessaloniki invited to participate in the educational seminars organized by *Diavazontas Megalono*, as part of a larger project intending to implement a large-scale intervention to enhance early literacy development by both integrating reading promotion into primary healthcare and establishing Infant and Toddler Libraries.

All trainees (n=43) were invited, through purposive sampling, to participate in this study, approximately one year after completion of the seminars so as to have plenty of time for implementing the initiative and educating families when they visited the primary healthcare work settings for vaccinations or child development follow-ups.

Inclusion criteria to the study were: participation in either of the two educational seminars and full time working at a primary health care setting providing services to children and families. Participants' group was comprised by a total of 13 health visitors.

2.3. Procedure

Data were collected through questionnaires with open ended questions inviting participants to describe their overall experiences and views on the implementation of the intervention in their everyday practice in primary care. The questionnaire also included questions to collect background information, including participants' specific working settings, an estimation of the percentage of families they discussed with about early literacy promotion at the clinic and of the percentage of families they informed during home visits.

Potential participants received information about the purpose and the role of the study, the importance of providing their views, perspectives and experiences on the implementation of this initiative, the aims of the research and the data collection procedure, and the anonymity and confidentiality of their responses. Returning the completed questionnaire to the researchers signified participants' consent to participate in the study. When analyzing and presenting the results, data were treated according to the principles of confidentiality. Data were collected between January and June 2019.

2.4. Data analysis

The data were analysed through thematic analysis [40], a process which involved grouping initial codes into potential themes, refining thematic categories, discussing alternative codes and themes through repeated data examination, achieving data saturation, and reaching consensus on the final themes. The data processing was conducted by the two researchers (ES and MB), analysis was conducted in Greek and the quotes selected were translated by the authors. The process yielded three main themes which are presented below.

3. Results

All participating health visitors (n=13) were females, the vast majority were working in primary health centres (84.6%) being actively involved in health promotion and health education with children and families during their routine practice. All health visitors reported that they had enough opportunities to fully implement their knowledge and skills in their everyday clinical practice. The majority of responders stated that they informed almost half of the families to which they provided services within their working settings, a percentage which increased to 72% concerning families with whom they discussed early literacy promotion during home visits. Detailed sample characteristics are provided on Table 1. Thematic analysis revealed the following three themes:

3.1. Parents' and children's responses

Participating health visitors referred that parents welcomed the information and reported their willingness to introduce literacy activities, such as sharing and reading aloud books with their infants and children in their daily family routine.

Parents who showed a particularly positive attitude to this initiative were mainly those who had been constant readers themselves. Health visitors documented that some parents had never thought that reading activities could be part of their interaction with their infants and young children and were astonished to learn so. For some parents, it was totally new information as no health professional had previously included this subject in health promotion guidance provided to them. As participants remarked:

“Parents were delighted to accept my advice and suggestions, especially those with young infants, as nobody had ever talked to them about reading activities from such a young age” (participant 8).

“... the fact that we were talking about age appropriate readings in a systematic way, and especially when I was explaining that even the way parents hold their babies when reading to them plays a significant role, it was very impressive to parents” (participant 1).

Table 1 Participants' and intervention data

	N (%)
Participating Health Visitors	13
<i>Female</i>	13 (100)
<i>Male</i>	0
Place of work	
<i>Health Center</i>	11 (84.6)
<i>Municipality Clinic</i>	1 (7.7)
<i>Public Health Clinic</i>	1 (7.7)
Estimated children's ages (months)	25.5 (mean)
Estimated percentage of families included in the intervention	48.6 (mean)
Estimated percentage of clinic visits	40 (mean)
Estimated percentage of home visits	72 (mean)

Some parents expressed doubts whether sharing books with their children could be a significant activity, particularly in the case of young infants, or appeared skeptical about the appropriateness of using books from such an early age or regarding the abilities of infants during the first months of life to benefit from reading activities; however, as soon as they participated in literacy oriented activities with their children, also motivated by child's own enthusiasm for the books, their attitude changed promptly and exhibited a positive responsiveness. As one participant recorded:

“Some parents had the perception that in the very young age, especially during the first months of life, reading to babies was not something so important. But when they were engaged in reading activities with their infants, their attitude was unexpectedly positive. In fact, once at the waiting area in the clinic and as I was talking to families, some parents volunteered to join the discussion wondering how they could assist me...” (participant 1).

Participants acknowledged that discussing with parents, providing the appropriate guidance and dispelling misconceptions, as being parts of their role in introducing early literacy promotion in their interactions with families. As one health visitor recognized:

“It is my role at this particular point to discuss with parents and highlight the significance and appropriateness of literacy promotion, even in the case of a child's young age” (participant 4).

Respondents documented that all infants and children were welcoming and enthusiastic on sharing books with both the health visitor and their parents, enjoyed reading aloud and were very willing to exploring books. They were reading and creatively playing with books during their stay in clinic's waiting area and showed their excitement to receive books as a gift. One health visitor characteristically noted that:

“There was great response on the part of the children; they were very happy to be engaged with books and reading while they were waiting for their turn at the clinic” (participant 13).

3.2. Perceived barriers and facilitators

Participants reported various facilitators and barriers in implementing early literacy promotion. Support from colleagues, encouragement through teamwork and support from administration had been very helpful conditions, as were some infrastructure circumstances such as sharing the building with regional kindergarten/day care centre, and location of the health service close to a public library.

According to participants' responses, the educational seminar had been fundamental for equipping them with the appropriate knowledge and information background, while in clinics where books were available (such as from donations) e.g. in service's waiting area, this further facilitated the process. One health visitor summarised the helpful factors as follows:

"the education I received at the seminar, the closeness to local day care center and my own eagerness to try..." (participant 9).

Families' own interest on the subject by showing motivation to hear more and learn how to introduce literacy activities with their children, also functioned as a significant facilitator for health visitors' endeavours. Another important factor which was mentioned that enabled the process was the nature of the daily health visitors' practice which involves meeting families at regular short intervals as they return to the mother-infant service for immunisations and well-child follow up appointments. Moreover, home visits, an integral part of health visitors' practice, were reported as providing more opportunities and time for relevant discussions and support of families in incorporating early literacy activities in their everyday interactions with their children.

Health visitors' own belief in the importance of this intervention was considered a major factor for its implementation and success, despite possible shortcomings; as one participant aptly remarked:

"the most important thing is for someone to believe in the necessity of this program and a way will be eventually found to be equipped with books..." (participant 1).

Not having children's books available both at the service to be used as demonstration materials and to be given out as gifts, was mentioned by many participants as a barrier, as was the unavailability of books in foreign languages, given that public health settings in Greece provide services to many immigrant and refugee families. One health visitor outlined the barriers she was facing as follows:

"the fact that I was trying alone with my own materials (books) in limited time..." (participant 9).

Other shortcomings included the lack of collaboration with colleagues and support from the administration, time constrains as well as the resistance to change exhibited by team and administration members at some participants' work settings. Heavy workload and the lack of appropriate space (e.g. a separate room where they could meet families), were additional barriers; however, some health visitors reported finding creative solutions to facilitate their interactions with parents and children, even in spatially unfavourable situations:

"establishing a 'reading corner' within clinic's waiting room, had been a condition which facilitated communication with families on this subject"(participant 7).

3.3. Suggestions and recommendations

Continuing education had been a suggestion by many participants, both for sustaining their efforts on the continuation of the intervention and for encouraging other members of the primary care team to be involved and/or to show support and understanding to health visitors' endeavours. According to one participant, she would strongly recommend:

"...continuation of the educational seminars for this theme to become broadly known to colleagues, pediatricians and health visitors, so as to achieve both optimal cooperation and commitment in providing information to parents" (participant 8).

Participants also suggested that books should be amply available in their working places both to provide to families as a gift so as to use them as a prompt to start reading activities with their children, and also to employ them as demonstration materials. Others suggested the availability of relevant information leaflets and brochures so as to distribute to parents.

All health visitors would recommend or had already mentioned this intervention to colleagues and urged them to implement it too. Health visitors in one setting reported that had already prepared a poster presentation at a health visitors' scientific conference regarding their experiences in program implementation in an effort to motivate other colleagues on the importance of the subject, especially those who provide services to families with low socioeconomic backgrounds. Another participant referred that she was discussing with colleagues to incorporate relevant communication in pre-birth visits of future parents. Willingness and enthusiasm to continue the program, especially in the context of home visits, was also reported. As one participant remarked:

"I have recommended this program to my colleagues as I think it is important to assist parents and children get to know reading activities, and this is particularly important for families facing adversities on social level..." (participant 6).

Some participants also stated that they disseminated the program to colleagues because they considered the intervention as an added value to health visitors' clinical practise:

"I have recommended and I continue to recommend this program to colleagues, because I consider the availability of such programs of great importance as they provide to the health visitor one more resource within the field of health prevention and promotion where we are already actively involved" (participant 4).

4. Discussion

The aim of the study was to explore the experiences and views of health visitors in implementing the first early literacy promotion intervention in Greece. Health visitors in our study reported that both parents' positive reactions to receiving guidance by them in introducing early literacy activities into their family routines, and children's own positive responses functioned as major sources of support for health visitors themselves to continue their efforts, despite possible unfavourable material conditions in their work settings. This finding is supported by a similar study by Erickson et al. [39] who sought to understand clinicians' experiences of applying 'Reach Out and Read' early literacy promotion program, by requesting their meaningful experiences in implementing the program. Qualitative analysis of participants' (n=592) views prioritized clinicians' perceptions on child/family responses (60%) (e.g. "Seeing a child read for the first time") as factors that supported their own satisfaction and commitment about the program.

Parents' positive receptiveness of literacy promotion programs in various cultural and socio-economic contexts has been documented in the literature [19, 41]. According to the study of Byington et al. [41] on parental reactions to an early literacy promotion program in a clinic for the underserved, parents appreciated the literary advice given by the staff, while for many of them this advice was new, which was also a finding in our research. Furthermore, the existence of the program was perceived by families as a demonstration of staff's special attention to children and genuine respect for the families served, important elements for building a trusting relationship between parents and clinicians. As concluded by Wu et al. [16], the significant increase in child-centered home literacy activities implemented by parents of infants 9-18 months represents tangible evidence of parents' willingness to accept clinician's advice. Parents' own motivation as they regard their children's enthusiasm when handling books, another finding in our study, has also been described in similar interventions [42].

Health visitors also reported witnessing children's own responses to reading, their enthusiasm and willingness to engage in reading activities even while in clinic waiting area, a finding which is important given that descriptions of children's reactions are very limited in the literature. Available research supports that children who not only show a greater interest in literacy-related activities but also voluntarily engage in them, are those who exhibit early language vocabulary development and better reading skills, pointing thus to the need to take advantage of individual children's interest by planning activities in which they are motivated to become fully engaged [43].

Furthermore, research underlines the significance of the active role a child plays in choosing his/her experiences from the early stages of development, including literacy interest; indeed as the study of Carroll et al. [44] has shown, preschool children's own literacy interest was the factor which had a substantial influence on preschoolers' emergent literacy skills, after controlling for parental education level, their occupational status, and home literacy environment. However, although environmental factors (e.g., maternal education, number of books, and frequency of shared book reading activities) have shown to be related to children's involvement in reading activities, fostering and motivating child's own engagement and active role during learning activities remains essential for language acquisition, even in young preschoolers 18-36 months, according to Dicaldo and Roch [43]. As authors note, when the child is actively involved, perhaps caregivers tend to increase the quality and the complexity of the literacy oriented activities, hence further increasing child's involvement, pointing thus to the fact that programs should focus on two aspects: expanding the range

of literacy-related activities and providing a stimulating home environment, and also improving the child's engagement during these activities, including a shift from passive to dialogic reading.

It is also of note that parents, according to health visitors in our study, were not aware of the significance of engaging in reading activities with their infants for prompting their development, concurrently exhibiting misconceptions whether reading to their children from an early age was developmentally appropriate. This finding is not uncommon in research describing parents' perceptions on when children are developmentally 'ready' for shared reading and book related activities, a situation consisting a barrier for early literary promotion [45]. It might be possible that parents have connected reading activities with formal teaching and school preparation, employed at the preschool age when the child is developmentally 'ready'; however, clinicians need to be aware of and clarify this misconception, having in mind that preschool children whose parents reported directly teaching literacy skills at home scored lower on early oral language development in comparison with those who had informal and mutually enjoyable interactions around books and reading [33].

An important finding of this study was that the fact that health visitors referred their own belief in the significance of the intervention as a motivating factor for its implementation, despite shortcomings. This contrasts with the findings of the study by Erickson et al. [46], where while most clinicians (51.5%) completely agreed that literacy promotion is as important as other health promotion advice and 46.6% completely agreed with the statement "discussing sharing books with children at health supervision visits can be an effective early intervention strategy," only 18.2% felt they would implement early literacy promotion practices during well child continuity visits.

Furthermore, health visitors in current study considered early literacy promotion as an added value to their profession, expanding their potential in promoting health and advocating the optimal development of infants and children. Indeed, health visitors have an important role in prevention and early intervention programs, aiming to the best possible start in life, improving outcomes for all children and reducing inequalities, including providing information on ways to promote early language acquisition, such as building a rich home learning environment [35]. Moreover, this family-oriented intervention empowers parents in their role in supporting their children unfolding and expanding their capabilities and potential. Health visitors work in partnership with parents to promote child development, assess their needs and identify their concerns at the earliest opportunity [35], while supporting and empowering parents has been reported as an important factor for the implementation and success of early literacy interventions [47].

Preceding educational program was reported as a facilitator by health visitors who also expressed the need of sustained support through continuing training on this subject. The potential of early literacy promotion training to increase the skills of trainees has been documented by the study of Kindratt et al. [48] who found that training of future primary care providers on parent-health professional child literary communication resulted in significant increases in trainees' total knowledge ($p < 0.001$) and attitudes after training ($p < 0.05$). Furthermore, according to the results of the study of Caldwell et al. [38] on literacy promotion training experiences and behaviors of clinicians in 42 'Reach Out and Read' implementation programs, those who participated in formal training were more likely than those who were not formally trained, to show a variety of literacy promotion activities such as distribute books (98% vs 92%, $p < 0.0001$), provide relevant anticipatory guidance (84% vs 67%, $p < 0.0001$), model shared reading (58% vs 33%, $p < 0.0001$), use books as tools for development assessment (71% vs 57%, $p < 0.0001$) and give the book to the child at the beginning of the visit to the clinic (56% vs 43%, $p = 0.0005$). Training and continuing education programs on promoting relevant professional expertise are thus fundamental for similar initiatives to be best incorporated in health professionals' clinical practice.

Common barriers which were reported by the participants in this study such as time constrains, insufficient funding and administration issues, have also been raised by primary care professionals in similar studies [49]. In the scoping review of Uthirasamy et al. [50] on 'Reach Out and Read' implementation, the most common identified application barriers were at the system level, i.e. deficient financing of the program and inadequate time. Time commitment and lack of funding for ensuring book availability was also reported by participating clinicians as the main program disadvantages in the study of Burton & Navsari [51] in a primary care early literacy program implementation. In contrast to the study of Mayne et al. [49], participants in our sample did not report concerns regarding parents' receptiveness as an implementation barrier.

Another important barrier reported by participants in our study had been the lack of support from the other members of primary care team and clinic administration, a finding which is important as research has shown that a facilitating clinic culture and team working are clearly related to success in implementing an effective primary care intervention, such as early literacy promotion [52]. However, a promising vision that has been reported in the research is that program implementation has the potential to boost clinical morale, by showing a positive impact on staff satisfaction, and motivating both clinicians' view of the program as a positive value for the clinic, and their eagerness to its

continuation [51]. As Erickson et al. [39] have shown, clinicians' views about the positive impact on clinic practice of implementing early literacy promotion were included in the factors that boosted their commitment to the program. Participants in our study might have also recommended training for the other members of the health care team in early literacy promotion hoping to create a supportive and rewarding clinic climate which would sustain their own efforts.

Participants in our study raised the issue of the availability of books both for demonstration as well as for donating to families; indeed, as research has shown, book giving to families, even from the newborn period, significantly promotes a literacy rich home environment [25, 34]. Concurrently, the availability of books would strongly facilitate, according to health visitors in our study, modelling of reading practices, a fact the significance of which has been underlined in research; for example in the study of Jimenez et al. [53], parental report of clinician modelling was associated with enhanced home literacy environments for Latino parents of infants 6–9 months old, highlighting thus modelling as a core component for early literacy promotion programs which providers should employ, in addition to book distribution and anticipatory guidance, so as to maximize impact. Furthermore, clinician modelling could make manifest the role of reading as a joyful, shared and interactive experience, which early literacy promotion programs underline, rather than an instructive activity [54].

The very limited availability of books in primary care settings that has been reported as a barrier for participants in this study, is important as books consist essential elements of program application; research about main implementation components of the 'Reach Out and Read' program, showed that 76% of respondents reported that they had books in the waiting room, 24% reported having volunteer readers, while 24% of programs provided information about local libraries [38]. However, as Zuckerman and Needlman [55] have stressed, while books given during well-child visits can serve as a symbol of the child's developmental potential, particularly for economically disadvantaged parents, and they are essential for reading aloud, early literacy programs should also aim to foster language-rich parent-child interactions and teach parents how to creatively engage in them, also including singing and talking.

Participants in our study also highlighted the fact that home visits provided them with more opportunities to engage in early literacy communication with families in comparison to time limited clinic visits; indeed, the fact that home is an ideal setting for empowering parents towards literacy development has been documented in research showing home visiting as an important catalyst for this purpose [44]. Moreover, incorporating early literacy promotion in home visiting could enhance minimizing early childhood adversity and thus its unfavourable impacts on child development, by both expanding the capacity of caregivers to establish nurturing relationships with children, and adopting a proactive stance of building socio-emotional, language and cognitive skills rather than waiting and screening for developmental deficiencies [28].

4.1. Future directions and implications for practice

Consistent reporting of the views of clinicians on the implementation of early literacy promotion programs could contribute to better understanding of the mechanisms underlying their impact, receive multilevel feedback and inform other early childhood interventions aiming to promote the best possible children development on population level [50]. This study could therefore add data on understanding how to facilitate implementation of literacy promotion guidelines, a concern raised in relevant literature [49]. As Erickson et al. [39] have remarked, further study is needed to understand how clinician's perspectives affect and are affected by their experiences in implementing early literacy promotion.

Implementation in several Greek primary care settings highlighted the welcoming of the literacy advice and willingness to get involved on the part of parents, a finding which has been demonstrated in the literature concerning other cultural health settings [38, 51], including those serving families of various ethnical and socioeconomic backgrounds [16, 35, 41, 43]. Further studies are needed to clarify facets of implementation in more detail as well as intrinsic and extrinsic factors that would lead to optimal outcomes, including the case of language-minority and at-risk children. Additionally, despite limited research on the subject, these interventions might also provide evidence pertinent for various cultural and social contexts, to counteract the impact of the overwhelming digital-media exposure of children, even young toddlers, on their developmental health [56, 57].

Taking into account health visitors' views and suggestions elicited in this study, there is a plan to incorporate book-gifting in the program and evaluate whether it might affect parents' and children's attitudes towards reading; as well as health visitors' own attitudes in promoting early literacy. Dissemination of this initiative to more health visitors will result in a motivated group of primary care health professionals with the necessary knowledge, skills and experience to both support families, and provide on-spot teaching for newly qualified colleagues and/or students. Given the fundamental role of health visitors in supporting families in raising their children, sustaining their efforts through training and continuing education programs, will provide to more children the chance to evolve into confident readers

with high literacy, cognitive, emotional and social skills, and hopefully to adults able to participate critically and consciously in the society as active citizens. Expanding the intervention to more families could contribute in promoting equity in early language experiences and literacy orientation activities, supporting thus infants and children to reach their developmental potential, irrespectively of socioeconomic family status [20, 53].

The outcomes of this first early literacy implementation in Greece will be presented both to the scientific community and key institutions, in order to support the intervention and expand it in more cities around the country. By expanding the program, a broad network of committed health visitors will be able to reach more families, inform them on the significance of early literacy activities and support them in incorporating literacy oriented practices in their daily routines with infants and young children.

4.2. Strengths and limitations

This is the first and only early literacy promotion initiative in Greece implemented in primary care settings and including health visitors as core professionals who could play a crucial role in the support of early literacy development; it is also the first one that is specifically addressed to children of preschool age, putting the emphasis on babies and toddlers. The results detected health visitors' perceptions and experiences of providing education and support to families in incorporating early literacy activities in their everyday routines with their children, information which is important for the sound foundation of such programs in the Greek health care context. This study also provides data on the actual early literacy promotion implementation, a theme where research remains limited, in comparison to data reporting the effectiveness of these interventions [50]. It also adds information on the scarcely researched subject of the relation between training and implementation of such programs, particularly regarding clinicians' views, attitudes, practices and behaviors [38], and of the discrepancy noted in research regarding the fact that while most clinicians support literacy promotion, less implement relevant activities in clinical practice [49].

One limitation of the study has been the fact that participants were all women; however, health-visiting is a profession traditionally dominated by women. Another limitation is the low response rate to this study which reached the percentage of 30%; nonetheless, data saturation could be achieved. Additionally, demographic data could have been richer and incorporating more questions on participants' characteristics, including years in practice. Furthermore, responses reflected only health visitors' perspectives, which may be different from the perspectives of parents themselves. As is true of qualitative research, it is not possible to generalize study findings, while potential correlations between health visitors' demographics and their practices were not investigated. However, documenting the perspectives of health visitors helps both understanding their attitudes and experiences, and identifying possible challenging aspects in implementing their knowledge and skills, findings which could highlight factors and processes that might influence positively or negatively, optimal implementation of similar initiatives and accordingly affect their impact on fostering infant and children development.

5. Conclusions

Health visitors play a fundamental role in supporting families to raise healthy children, promoting children's growth and development, and implementing preventive interventions to avoid future problems in biological, affective, developmental, social and educational levels. In this context, they are in favorable position for promoting early literacy and empowering parents to incorporate literacy oriented activities with their infants and toddlers in their everyday family routine. Parents' and children's positive receptiveness as well as health visitors' own belief in the significance of the intervention were considered major factors for its implementation and success, despite time constrains and system level limitations. Continuing education programs were regarded as a source for constant support to health visitors, enabling them to steadily expand promotion of early literacy development to children and families in their daily practice and overcome common barriers and shortcomings. Consistent reporting of the views and experiences of clinicians on the actual implementation of early literacy promotion interventions could facilitate understanding facets of the process significant for their efficiency in maximizing the developmental potential of infants and children.

Compliance with ethical standards

Acknowledgments

Authors would like to thank the non-profit organisation *Diavazontas Megalono* for implementing the two seminars and providing all the appropriate teaching material. We also express our appreciation to all health visitors who participated in this study.

Disclosure of conflict of interest

No conflict of interest has been declared by the authors.

Statement of ethical approval and informed consent

All participants were informed about the aims of the research and the anonymous data collection procedure and they consented to participate in the study by returning the completed questionnaires. When analyzing and presenting the results, data were treated according to the principles of confidentiality.

Data availability statement

Data collected for this research study are not publicly available to protect participant confidentiality and privacy.

Author contributions

- Maria Bouri: Conceptualization; data analysis; writing – original draft, review and editing.
- Evanthia Sakellari: Conceptualization; methodology, data analysis; review and editing.

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