



Predictors of shared book reading at home with preschoolers: Are there differences between Roma and non-Roma low-income families?

Inês A. Ferreira^{1,3} · Carla S. Silva^{1,2} · Leonor Neves¹ · Sofia Guichard^{1,4} · Cecília Aguiar¹

Received: 28 March 2021 / Accepted: 27 June 2021
© The Author(s), under exclusive licence to Springer Nature B.V. 2021

Abstract

Previous research highlights several benefits of shared book reading (SBR) for child development, but less studies exist about its predictors (Yarosz and Barnett, 2001). Literature on home SBR in Portugal is scarce (Araújo & Costa, 2015; Peixoto et al., 2008), and studies on its predictors in families at socioeconomic risk or Roma families in this context are, respectively, reduced (Gamelas et al., 2003) or inexistent. This study aimed to investigate the predictors of the frequency of SBR in two ethnically diverse groups of families. Specifically, we studied the associations between child and family (mother) characteristics, parental aspirations, and parental involvement in preschool events and frequency of home SBR. Two hundred and six caregivers of Portuguese Roma ($n = 101$) and non-Roma ($n = 105$) low-income preschoolers (109 boys; $M_{\text{age}} = 5$, $SD_{\text{age}} = 0.94$) living in the Metropolitan areas of Lisbon and Oporto, Portugal, completed a survey, in face-to-face meetings. A multiple regression model, using AMOS (v. 25), showed that mothers' educational level, educational aspirations for their child, and involvement in informal (but not formal) events in preschool were positively associated with frequency of SBR. Ethnicity did not moderate these associations. The overall similar pattern results for Roma and non-Roma low-income families is an important finding, suggesting that these families may experience similar challenges in engaging in SBR with their preschool children and, therefore, may benefit from interventions with similar features.

Keywords Home shared book reading · Roma · Low-income · Educational aspirations · Parental involvement · Preschoolers

✉ Inês A. Ferreira
inesalvesferreira10@gmail.com; ines.alves.ferreira@iscte-iul.pt

Extended author information available on the last page of the article

1 Introduction

The home literacy environment (HLE), and notably home adult–child literacy activities, are important predictors of children’s early literacy (e.g., Davidse et al., 2011; Inoue et al., 2018), reading and writing skills, and later academic achievement (e.g., Froiland et al., 2012; Shahaeian et al., 2018). One activity that has received special attention in the home literacy research is shared book reading (SBR). Considered in this study as a component of the HLE, SBR positively impacts children’s literacy and linguistic outcomes, according to previous meta-analyses (Bus et al., 1995; Scarborough & Dobrich, 1994; Trivette et al., 2010). It is also associated with the development of important cognitive (Evans & Shawn, 2008) and socioemotional (Baker, 2013) skills, while potentially enhancing the relationship between the adult and the child (Kassow, 2006; Neyer et al., 2018).

Several studies on SBR have focused on families with lower socioeconomic status (SES) and from ethnic minorities (e.g., Barnes & Puccioni, 2017; Kuo et al., 2004; Yarosz & Barnett, 2001). Importantly, only a few studies have focused on literacy activities in Roma families (e.g., Lauritzen & Nodeland, 2018; Levinson, 2007; López-Escribano & Béltran, 2009), who are amongst the most deprived and discriminated in Europe (European Union Agency for Fundamental Rights, 2016). Studies on Roma children’s education in European contexts increased in the last two decades, but most available literature, and particularly on literacy, comes from English-speaking countries, such as the United Kingdom (Lauritzen & Nodeland, 2018). In Portugal, Roma communities suffer from persistent educational inequalities and discrimination (Mendes, 2012; Mendes et al., 2020) despite national efforts to promote inclusive education (Mendes et al., 2014). Understanding the predictors of home literacy practices, namely SBR, in families at risk of educational inequalities is important to inform policies and interventions. Thus, the purpose of this study was to examine the predictors of home SBR in families of preschoolers from Portuguese Roma and Portuguese non-Roma low-income communities.

1.1 Home literacy environment and shared book reading

HLE is an aspect of the home learning environment (e.g., Melhuish et al., 2008) that comprises home resources and activities promoting child literacy (Kassow, 2006; Leseman & de Jong, 1998). Literacy activities can be more formal (i.e., training, code-focused activities, like teaching the alphabet and words) or informal (i.e., entertainment, meaning-focused activities, such as SBR), in terms of children’s interaction with the print material (see the Home Literacy Model, Sénéchal & LeFevre, 2002). SBR may be considered an informal (Sénéchal & LeFevre, 2002) and entertainment-focused (Pacheco & Mata, 2013) adult–child literacy practice that refers to the “exposure to children’s books with a caretaker’s direct involvement” (Celano et al., 1998, p. 172). SBR is one of the most studied activities in home literacy research, not only for how easily it can become a family routine (Neyer et al., 2018), but also for its associations with early cognition, including language

acquisition (e.g., Resende & Figueiredo, 2018; Sénéchal & LeFevre, 2002, 2014), emergent literacy (e.g., Bracken & Fischel, 2008; Evans & Shawn, 2008; Inoue et al., 2018; Mata & Pacheco, 2009), and early reading achievement (e.g., Barnes & Puccioni, 2017; Gottfried et al., 2015; Salvador & Martins, 2017).

The significant role of the frequency of SBR on child literacy is largely documented (e.g., Bus et al., 1995; Gottfried et al., 2015; Scarborough & Dobrich, 1994; Shahaeian et al., 2018; Silinskas et al., 2012). For instance, Sonnenschein and Munsterman (2002) found that frequency of SBR was the only significant correlate of five-year-old's early literacy skills. In addition, low SBR frequency in the preschool age is associated with poor vocabulary (Farrant & Zubrick, 2013). Reviews show that SBR, both at home and at preschool, positively predicts young children's vocabulary learning (Mol et al., 2008, 2009; Wasik et al., 2016). The positive effect of SBR extends to children's socioemotional skills (Baker, 2013; Rose et al., 2018) and positive parent-child relationships (Fletcher & Reese, 2005; Neyer et al., 2018). Children's involvement in SBR at a young age may boost their further interest and motivation for reading (Baker et al., 1997; Bracken & Fischel, 2008; Sonnenschein & Munsterman, 2002), which, in turn, may be associated with children's increased autonomous reading practice and later reading competence (Schiefele et al., 2012). Furthermore, longitudinal studies show persisting positive effects of children's involvement in SBR at an early age on academic achievement, throughout childhood (Farrant & Zubrick, 2013; Sénéchal & LeFevre, 2014; Shahaeian et al., 2018) and up to adulthood (Gottfried et al., 2015).

Family literacy studies in Portuguese samples have also reported associations between SBR and increased literacy skills in preschoolers (Gamelas et al., 2003; Mata & Pacheco, 2009) and reading achievement in elementary school students (Salvador & Martins, 2017). Portuguese parents seem to engage less often in literacy leisure-related (i.e., informal/entertainment) practices, such as SBR, than in literacy teaching-related activities (i.e., formal/training), with young children (Mata & Pacheco, 2009; Salvador & Martins, 2017). In 2011, only 42.5% of Portuguese parents often read books with their preschool-aged children (Arqueiro et al., 2016). As Portugal witnessed a decline in young children's average reading performance (at the national level) between 2011 and 2016 (Mullis et al., 2017), and considerable heterogeneity in Portuguese preschoolers' literacy skills has been reported (Leal et al., 2006), a deep understanding of the factors that contribute to (the frequency of) positive family literacy practices may be key to promoting equality in educational achievement.

In general, research on home SBR in Portugal has been scarce (e.g., Peixoto et al., 2008), and focused on family literacy practices (Mata, 2006) and their impact on child development (Mata & Pacheco, 2009; Salvador & Martins, 2017). Furthermore, most studies have focused on families of medium to high SES (e.g., Pacheco & Mata, 2013; Salvador & Martins, 2017) and less on families of lower SES (Gomes & Vale-Dias, 2017; Mata & Pacheco, 2009). Most studies have found that Portuguese children are more exposed to literacy training (i.e., teaching-related) than entertainment (i.e., leisure-related) literacy practices, and that, within the latter, SBR seems to be the most common practice in Portuguese families (Gomes & Vale-Dias,

2017; Mata, 2006). Moreover, the available studies have focused mainly on the characteristics (i.e., the quality) of parent–child interactions during SBR and their effects on children’s literacy development (e.g., Peixoto et al., 2008, 2011), rather than SBR frequency and its predictors (Mata, 2006; Pacheco & Mata, 2013). To our knowledge, few empirical studies examined the predictors of SBR in Portuguese families at socioeconomic or sociocultural risk (e.g., Araújo & Costa, 2015; Gamelas et al., 2003), with none focusing on Roma families. Besides, most studies targeted the implementation and/or evaluation of specific family literacy programs and their effect on children’s literacy (e.g., Gamelas et al., 2003; Nabuco et al., 2014).

1.1.1 Shared book reading in low-SES and Roma families

Families’ sociocultural context matters for children’s educational opportunities (Leseman & de Jong, 1998). Multiple risk factors tend to accumulate in families living in socially disadvantaged areas (Garbarino & Sherman, 1980), and neighborhood socioeconomic status (SES) may hinder home literacy (Froiland et al., 2013). Importantly, children from families with higher income and/or higher educational levels are more likely to be frequently read to (Araújo & Costa, 2015; Bracken & Fischel, 2008; Hartas, 2011). Accordingly, children from lower-SES families may be at increased risk of early reading difficulties and reduced academic achievement (Hartas, 2011; Herbers et al., 2012). Aikens and Barbarin (2008) found pre-reading disparities by SES already at kindergarten age, which were better explained by family factors such as frequency of SBR, number of books in the home, and parental involvement in preschool.

Even though SBR frequency and duration, book ownership, and parental reading habits may vary across low-income families (Bracken & Fischel, 2008), previous studies found positive effects of SBR interventions in literacy among children from low-income areas (e.g., Lefebvre et al., 2011; Shahaeian et al., 2018). In Portugal, results from the Progress in International Reading Literacy Study (PIRLS) 2011 suggest a larger positive effect of frequent SBR on reading competence of preschool children from families with lower, but not higher, education (Araújo & Costa, 2015). This evidence supports the need to understand the predictors of SBR in low-SES Portuguese families.

A few studies in Portugal have focused on the impact of cumulative family risk on children’s literacy development (e.g., Cadima et al., 2015). In this case, the exposure to cumulative family risk factors (such as low education, low income, and unemployment) strongly and negatively predicted children’s literacy skills (Cadima et al., 2010). However, no family literacy studies in Portugal have considered ethnic minority status as an additional risk factor. International literature suggests that in ethnic minority families, when compared to ethnic majority families, there is a tendency for less exposure of children to SBR (Barnes & Puccioni, 2017; Hayes et al., 2018; Raikes et al., 2006; Yarosz & Barnett, 2001). Importantly, most studies have considered ethnic minorities with an immigrant background, and their situation may not be comparable to that of the Portuguese Roma communities, which have been living in Portugal for more than 500 years.

Although there is no official number for the Portuguese Roma population, as Portugal currently does not allow the identification of citizens based on ethnicity, approximately 0.4% of the Portuguese population is estimated to be Roma (Santos & Moreira, 2017), with several Portuguese Roma communities in the country, almost all sedentary (Mendes et al., 2014). Many Portuguese Roma live in non-classic (32%) or social housing (48%) (Ferreira, 2014). Most families (74%) have a household income that hardly makes ends meet (European Union Agency for Fundamental Rights, 2016) and show predominantly lower educational levels, particularly in women (Mendes et al., 2014). Absenteeism and school failure of Roma children starts in elementary school, often leading to early school dropout (Magano & Mendes, 2016). However, intergenerational change seems to be emerging, with younger generations showing increased literacy skills and educational qualifications (Lopes & Costa, 2016), more women attending adult education, and early education being highly valued (Mendes et al., 2014, 2020). This could be related to the implementation of important social and educational public measures over the last decade. For instance, a National Strategy for the integration of Roma Communities, has been implemented since 2013, with a focus on education, employment and training, to address the exclusion of these communities (Resolução do Conselho de Ministros n.º 25/2013). Also, under the *Escolhas* program (a national non-formal learning intersectoral program implementing local projects fostering social inclusion of children and youth living in socioeconomically vulnerable contexts), the Promotion of Education Operational Program, has provided university scholarships to Roma students. According to Mendes and Magano (2021), this program is associated with higher attendance and educational success of Roma youth in higher education, and higher educational aspirations among the youngest.

Lifestyle (Casa-Nova, 2006) an increase in Roma studies in Europe over the last decades (Lauritzen & Nodeland, 2018), literature on the HLE of Roma communities is still scarce (e.g., Dolean et al., 2016; Kyuchukov, 2006). The few studies conducted in European countries have found Roma children's (pre- or basic) literacy skills to be lower than those of non-Roma children (Baucal, 2006; López-Escribano & Beltrán, 2009). While some suggest that the underachievement of Roma children is rooted in families' lower SES, by shortage of resources and lower-quality stimulation (Baucal, 2006; Biro et al., 2009), others argue that sociocultural specificities may also explain it (Casa-Nova, 2006; Dolean et al., 2016; Levinson, 2007), including children's and families' perceptions and attitudes towards learning and the school system (Clavell-Bate, 2012) and educational aspirations (Magano & Mendes, 2016; Rosário et al., 2014). The discrepancy between the (majority) school culture, valuing rules and adult authority, and the (minority) home culture, valuing children's rhythm and autonomy, has been highlighted as a factor explaining Roma children's educational trajectories (Casa-Nova, 2006; Lopes & Costa, 2016; Mendes & Magano, 2016). Portuguese Roma families and children seem to value basic literacy skills, as a reason for attending school (Casa-Nova, 2006), but also seem to believe that the acquisition of such skills can be enough for later daily life (e.g., getting a driving license; Nicolau, 2016), and for pursuing a Roma traditional lifestyle (Casa-Nova, 2006).

Academic achievement and schooling of Roma children may be enhanced through engagement in early childhood education (Nicolau, 2016). Despite the increase in Roma parents' awareness of the importance of preschool education, with more children attending preschool (Lopes & Costa, 2016), it is not yet a usual practice (Mendes, 2012). In Portugal, only about 42% of Roma children aged 4 to 6, more boys (51%) than girls (31%), attend preschool (European Union Agency for Fundamental Rights, 2016). Main barriers for the use of educational, and particularly early childhood education services, seem to be the fear of interpersonal conflicts and child abuse (Nicolau, 2016), and distrust in the system (Magano & Mendes, 2016; Mendes, 2012).

With a few exceptions (e.g., Kyuchukov, 2006), most studies addressing Roma families' involvement in children's education and literacy activities have considered mostly school-based involvement (Dolean et al., 2016). Some interventions focusing on involvement in education at home, with Roma, Gypsy, and traveler families, attended to more formal (e.g., parental teaching; Clavell-Bate, 2012) than informal activities like parent–child SBR. Roma literacy programs targeting children through parents' literacy development exist in Europe (Roma Education Fund, 2019). However, we found no studies in Portugal about home literacy practices in families of preschool-aged Roma children. Interestingly, most available evidence focuses on SBR as means to achieve other outcomes, at the child, parent, or dyad levels, with few studies considering it as an outcome and focusing on its predictors (e.g., Kuo et al., 2004; Yarosz & Barnett, 2001). Taken together, this body of evidence highlights the need to further investigate the predictors of SBR (e.g., Gottfried et al., 2015; Liu et al., 2018) in Roma and non-Roma low-income families.

1.2 Child, family, and contextual predictors of SBR

1.2.1 Family characteristics: parental education

Parental education is the predictor of SBR most often referred to in the literature. Previous reviews and meta-analyses show consistent associations between parents' educational level and SBR with children (Mol et al., 2008), as well as moderating effects of parents' educational level on the association between parental involvement in literacy practices and children's literacy development and academic skills (Boonk et al., 2018; Noble et al., 2019). Parents with higher educational levels tend to spend more time reading to their children than those with lower educational levels (e.g., Araújo & Costa, 2015; Gottfried et al., 2015; Hartas, 2011; Kuo et al., 2004; Scarborough & Dobrich, 1994). It has also been suggested that, in low-SES and/or ethnic minority families, more than family income, parental educational attainment plays a primordial role in enriching children's HLE (Froiland et al., 2013; Yarosz & Barnett, 2001), and in promoting literacy and academic achievement (Bracken & Fischel, 2008). In a study with preschool children considering different home learning activities, Hartas

(2011) found parental education impacting exclusively frequency of parent–child reading, and thus affecting language/literacy and socioemotional development. Also, a recent study suggests that Roma children’s pre-literacy skills are related to mother’s education (Dolean et al., 2016).

1.2.2 Child characteristics: age and sex

Previous findings suggest that the younger the child, the higher the frequency of parent–child SBR (Yarosz & Barnett, 2001) and the greater its impact on language or literacy development (McKean et al., 2015; Mol et al., 2008). Considering a mainly low-SES and ethnically diverse sample, Yarosz and Barnett (2001) found that adults read more to children from birth to age 3, with a much smaller increase from 3 to 5 years old. Sex differences in frequency of parent–child SBR have also been suggested. Particularly at a young age (up to 2 years old), girls seem to be read to more often than boys (Raikes et al., 2006). Also, the frequency of SBR with boys may decline more rapidly from 2 to 6 years old compared to girls (Hayes et al., 2018). This aspect is particularly important in Roma children’s education. Traditionally, boys’ education is valued over girls’, with early school dropout more tolerated for the latter (Mendes et al., 2014). However, Nicolau (2016) and Casa-Nova (2006) also suggest a change in Portuguese Roma families’ mindset, with an increase in elementary school attendance regardless of children’s sex (Magano & Mendes, 2016). Besides, literacy of Roma women has increased, with more women becoming involved in adult education (Mendes & Magano, 2016; Mendes et al., 2014). Thus, although family support in home literacy practices may be generally higher towards Roma boys, a difference may not exist in the preschool period.

1.2.3 Parental educational aspirations

Parental educational aspirations are the ambitions and goals parents hold for their children’s further educational attainment (Gutman & Akerman, 2008; Yamamoto & Holloway, 2010), which relate to children’s own aspirations and achievement over time (Boonk et al., 2018; Froiland et al., 2012). Parental educational aspirations are usually assessed in terms of the level of formal education that the parent(s) would like, want, or prefer, that their child achieves (Dandy & Nettelbeck, 2002; Gutman & Akerman, 2008). Importantly, parental educational aspirations seem to be associated with parental involvement at home (Wang et al., 2016), namely in literacy practices (Martini & Sénéchal, 2012). A study with elementary school children from low-SES and ethnically diverse families found that parents’ educational expectations were positively associated with home reading and, indirectly, with children’s increased school achievement (Davis-Kean, 2005). Similarly, Froiland and colleagues (2012) showed that parents’ educational expectations in kindergarten were positively associated with home literacy support (including SBR), predicting children’s literacy, concurrently and in secondary school. Previous studies have also shown that low-SES

and Roma parents have lower academic aspirations for their children (e.g., Englund et al., 2004; Rosário et al., 2014), which may negatively impact their involvement in learning activities with them. Interestingly, in the Portuguese context, Roma families living in the metropolitan areas of Lisbon and Oporto show higher educational aspirations when compared to Roma families living in other regions of the country (Magano & Mendes, 2016).

1.2.4 Parental involvement in preschool

In Portugal, preschool education serves children from 3 up to 6 years old (the age of entry in first grade, elementary school) and, since 2015, there is a mandate for universal access from the age of 4. While preschool is not mandatory, coverage rates are relatively high, with approximately 83%, 93%, and 94% of 3, 4 and 5-year-olds, respectively, attending preschool (school year 2017/2018; Direção-Geral de Estatísticas da Educação e Ciência, 2019). Preschool is provided by public and private settings (including private for-profit and private non-profit settings) under the responsibility of the Ministry of Education. In 2017/2018, 53.1% of preschool-aged children were enrolled in public settings, with 30.7% enrolled in private non-profit settings and 16.2% enrolled in private for-profit settings (Direção-Geral de Estatísticas da Educação e Ciência, 2018). The main aims of preschool in Portugal are to promote children's development, to foster their integration into diverse social groups, to enhance curiosity and critical thinking, to provide the conditions for children's well-being and safety, and to identify children in need for additional support, while encouraging families to participate in the educational process (Doe, 2019; Law No. 4/97 of the Republic Assembly).

According to Bronfenbrenner and Morris (2006), child development is influenced by each setting (microsystem) in which the child is included (e.g., home, preschool) but also by the interactions between settings, defined as mesosystems. Therefore, children's literacy may develop from mesosystemic links between the home (family) and the preschool (educators). Parental preschool-based involvement includes participation in preschool activities for parents, namely parental attendance of formal events such as parent-teacher conferences and participation in informal school events (Pomerantz et al., 2007). It should be distinguished from parental engagement, which involves a commitment and the feeling of ownership of the action (Goodall & Montgomery, 2014). In Portugal, most preschools promote parents' involvement through formal events, such as periodical meetings/conferences between teachers and parents (individually or in group) aimed to inform and/or discuss child's development or behavior, training workshops on specific subjects (e.g., literacy), or open class days for parents (i.e., participation in a full or half day in the child's classroom); as well as informal events, such as social events to families and local community, like a final school year (or semestral) event or smaller meetings in the classroom (Mata & Pedro, 2021).

Preschool parental involvement is associated with children's cognitive gains, namely in pre-literacy skills (Arnold et al., 2008; Galindo & Sheldon, 2012). As an example, a study with low-SES ethnically diverse families found family involvement

in preschool, in both formal (e.g., attendance of parent-teacher conferences) and informal (e.g., preschool social events) activities, throughout children's schooling trajectory, to be related to enhanced literacy skills (Dearing et al., 2006). In addition, participation in preschool events for parents (namely literacy interventions; Pahl & Kelly, 2005), and contact with school staff (namely the teacher; Sawyer et al., 2018) are associated with parents' home-based learning practices (Goodall & Montgomery, 2014). However, less is known about the relationship between parental involvement in preschool and parent-child SBR.

1.3 The current study

There is substantial evidence on the advantages of SBR for children. However, fewer studies have considered SBR as an outcome, aiming to investigate its predictors (e.g., Kuo et al., 2004; Yarosz & Barnett, 2001), which is important to inform and improve literacy interventions and policies. Existing studies have almost exclusively analyzed child or family sociodemographic predictors (e.g., Yarosz & Barnett, 2001) while parental educational aspirations and parental preschool involvement have been neglected (e.g., Froiland et al., 2012). In addition, while several studies have investigated home SBR (or HLE in general) in low-SES and ethnically diverse families (e.g., Aikens & Barbarin, 2008; Hayes et al., 2018), a limited number of studies have focused on Roma families (Dolean et al., 2016), namely in southern European countries.

In order to address these gaps in the literature, this study investigated the associations between mother and child characteristics, parental educational aspirations for the child, and parental involvement in preschool (formal and informal) events and the frequency of home SBR in Portuguese Roma and Portuguese non-Roma low-income families of preschoolers, while testing the moderating role of ethnicity. We hypothesized increased frequency of home SBR when the child is younger (H1), when the child is a girl (H2), and when the mother has more years of formal education (H3). We also expected higher parental educational aspirations for the child (H4) and parental involvement in children's preschool events, both formal and informal (H5) to be positively associated with frequency of home SBR. Furthermore, we expected a moderating effect of ethnicity (H6), with educational aspirations expected to be a stronger predictor in Roma families.

2 Method

2.1 Context and participants

This study was developed within the ISOTIS (Inclusive Education and Social Support to Tackle Inequalities in Society) project. It builds on data collected within Work Package 2 (WP2) of ISOTIS, which aimed to understand cultural and linguistic resources, acculturation-participation orientation and identity construction, experiences with (early) education provisions and other services, aspirations and

expectations, and the wellbeing of families and children in disadvantage. To achieve these goals, the ISOTIS research team developed, piloted, and conducted structured interviews with mothers of children aged 3 to 6 or 9 to 12 years-old, from three disadvantaged groups, across ten countries. Considering the number of sources of variance in this international study design, focusing on fathers as an independent group of interest was not prioritized, although fathers (and other main caregivers) were allowed to participate when the mother was not the main caregiver of the target child (for detailed information, see Broekhuizen et al., 2018). Moreover, high correlations between mother's and father's educational perspectives (e.g., aspirations) were found in previous studies, namely in Roma and non-Roma families (Dimitrova et al., 2018) may further justify the focus primarily on the perspectives of children's main caregiver instead of both parents' perspectives.

In Portugal, interviews were conducted with Portuguese Roma and Portuguese non-Roma low-income families. All participants lived in the Metropolitan Area of Lisbon (M. A. Lisbon) or in the Metropolitan Area of Oporto (M. A. Oporto). These sites were selected because they are the largest urban areas in Portugal, with a high number of Roma (Mendes et al., 2014) and low-income residents (with 12.9 and 15.7% unemployed in 2011; 3 and 5% receiving social security benefits in 2016; and 40.2 and 23.3% of preschoolers receiving School Financial Assistance in 2015/2016, in the M. A. Lisbon and M. A. Oporto, respectively; Direção-Geral de Estatísticas da Educação e Ciência, 2017; Pordata, 2017a, 2017b).

This study included data from 238 Portuguese mothers (or other primary caregivers, 3%) of preschool-aged children (i.e., aged 3 to 6 years-old), ($M_{age}=5$, $SD_{age}=1.00$). The target child of 13% of these mothers did not attend preschool and, therefore, they were not included in this study. Children attending preschool were older ($Mdn=5.00$) than those not attending preschool ($Mdn=4.00$), $U=1419.500$, $z=-5.38$, $p<.001$. Also, they were more frequently involved in book reading activities at home ($Mdn=3.67$) than those not attending preschool ($Mdn=3.00$), $U=2437.000$, $z=-2.38$, $p=.017$. Mann–Whitney non-parametric test results revealed no significant differences on preschool attendance as a function of mothers' education and educational aspirations for their children. Also, Pearson chi-squared test results showed no significant difference in preschool attendance between Roma and non-Roma, $\chi^2(1)=2.01$, $p=.185$, with 83.5% of Roma and 89.7% of non-Roma participants attending preschool. We also did not find differences as a function of site, $\chi^2(1)=1.6$, $p=.255$, with 89.5% of those residing in the M. A. Lisbon and 83.9% of those living in the M.A. Oporto, attending preschool. Therefore, the analytical sample consisted of 206 mothers (or other primary caregiver, $n=6$) of children attending preschool, of which, 101 were Roma ($M_{age}=29.77$, $SD=7.15$) and 105 were non-Roma ($M_{age}=34.33$, $SD=7.26$). More information on study participants is shown in Table 1.

2.2 Procedure

This study was approved by the ethics committee of ISCTE-IUL (Parecer 21/2017), as well as by the Portuguese Data Protection Authority (No.

Table 1 Child and family characteristics (N = 206)

	Roma (low-income) (n = 101) %	Non-Roma (low-income) (n = 105) %
Mother's educational level		
1-4th grade	62	11
> 4th grade	38	89
Child's age		
3-4 years	30	35.2
5-6 years	70	64.8
Child's sex		
Male	54.5	51.4
Female	45.5	48.6
Household Income (Euro)		
< 430	28	28
430-780	54	55
780-1170	10	14
1170-1400/3150	1	3
Unknown	7	
Site		
Metropolitan Area of Lisbon	56	43
Metropolitan Area of Oporto	44	57

Participants were mothers (97%). Child's father ($n=2$) or a female main caregiver (e.g., grandmother; $n=4$) participated when the mother was not the main caregiver or was not involved in the child's life

10512/2017). During the 2017/2018 school year, within both metropolitan areas, local public school clusters (M. A. Lisbon, $n=46$; M. A. Oporto, $n=26$), social organizations (e.g., charities, community centers, foundations; M. A. Lisbon, $n=31$; M. A. Oporto, $n=45$), and community/locally based governmentally funded projects (M. A. Lisbon, $n=9$; M. A. Oporto, $n=16$) were contacted to collaborate in the recruitment of participants. Mediators working with (or key-persons within) Portuguese Roma communities were also involved in recruitment ($n=5$ in each site) and compensated for each valid interview (namely, a 10-euro voucher per valid interview, to be used in any store of a company including well-known supermarkets, cafeteria, sport, health, and clothing stores). All collaborators were first informed about the study's aims and procedures and, after agreeing to participate, they directly contacted potential participants on behalf of the researchers and/or helped organize meetings with the participants. Mothers' selection criteria included (1) being a member of a Portuguese Roma community living in the target sites, or (2) being a native-born Portuguese residing in a deprived neighborhood within both sites (e.g., a neighborhood where over 50% of school children received school financial assistance); and (3) having a

child between 3–6 or 9–12 years old. Only mothers with children in the younger group were included in this study.

After informed consent was obtained from all participants, in a face-to-face meeting, trained interviewers helped participants complete an online survey. For more detailed information on recruitment and interview procedures, monitoring and training of interviewers, see Broekhuizen and colleagues (2018). At the end of the meeting, participants received a children's book and gift certificate. Data were collected between December 2017 and July 2018.

2.3 Measures

Participants filled out the following measures in an online survey, with the support of trained interviewers, in face-to-face individual meetings.

2.3.1 Home shared book reading

Frequency of adult–child home SBR was assessed with three items, regarding how often an adult in the home (1) read or narrated a picture book, (2) read a story book, and (3) read a book on a topic of interest (e.g., history, dinosaurs, space, etc.) to the target child, using a 6-point scale from 1=(*almost*) *never* to 6=*every day*. Participants were informed that picture books focused on illustrations or pictures and, therefore, had limited or no text; story books focused on text, with illustrations supporting the reader(s); and books on a topic of interest were mostly non-narrative, informational books. Items were designed for the ISOTIS project, as part of a larger scale assessing the home learning environment (see Broekhuizen et al., 2018). For this study, a composite score consisting of the mean of the three items was used ($\alpha=0.80$). Parental report of frequency of SBR is widely used in the literature (e.g., Barnes & Puccioni, 2017; Hayes et al., 2018).

2.3.2 Mother's educational level

Participants' education was measured as the number of completed years of formal education using one item (At which grade/year did you leave school?). In selected cases, for participants who later completed a higher level of education, the corresponding years of education were added.

2.3.3 Parental educational aspirations for the child

One item assessed mothers' educational aspirations for their child (What level of qualification would you like [target child] to complete?), which was adapted from Buchmann and Dalton (2002). Answers were scored using a 5-point scale (1=ISCED 1–2 (*primary to lower-secondary education*); 2=ISCED 3 (*upper secondary education*); 3=ISCED 4–5 (*post-secondary non-tertiary education to short-cycle tertiary education*); 4=ISCED 6 (*Bachelor or equivalent*); 5=ISCED 7–8 (*Master to PhD or equivalent*)).

2.3.4 Parental involvement in preschool

The original scale included four questions about the frequency of parental involvement in preschool, in terms of volunteering and participating in preschool activities in the last six months (see Broekhuizen et al., 2018). A preliminary descriptive analysis showed that two of the items (Helping in my child's classroom or preschool (e.g., cleaning toys, reading with children), and Helping in my child's preschool events (e.g., school trips, sports tournaments, fundraising events, etc.)) had an absolute value of skewness higher than three -respectively, $sk=3.67$, $sk/SE=21.75$ and $sk=3.41$, $sk/SE=20.20$ -thus presenting a highly skewed distribution (Kline, 2011). Therefore, these items were excluded. More than 80% of the participants reported not being involved in such activities or that these were not available in their child's preschool. Moreover, a composite score based on the remaining two items (by split-half reliability, Spearman-Brown coefficient), revealed unsatisfactory consistency, $\rho=0.38$. Therefore, we used two single items: Parental involvement in preschool formal events, assessed with the item Taking part in meetings offered by the preschool to hear about what my child learns in preschool and how I can help my child's learning at home; and Parental involvement in preschool informal events, assessed with the item Taking part in social events organized for parents and families at my child's preschool. Items were scored using a 5-point scale (1 = *Never*, 2 = *Once or Twice*, 3 = *Three or five times*, 4 = *Once per month*, 5 = *More than once per month*).

2.4 Data analysis

First, we conducted missing value analysis and computed descriptive statistics, bivariate correlations among variables, and mean differences as a function of participants' group. Missing data within the model variables were analyzed, using IBM SPSS v25 (IBM Corp., 2017). The amount of missing data was 0.0 for parental involvement in preschool (both formal and informal) events and (adult-child) home SBR, 0.5% for children's age, 1.0% for mothers' educational aspirations for their child, and 4.4% for mothers' education, which is considered small (Widaman, 2006). Little's (1988) Missing Completely at Random (MCAR) produced a non-significant chi-square (Little's MCAR test: $\chi^2=18.19$, $df=14$, $p=.198$), thus leading to the conclusion that missing data were completely at random (Ullman, 2001). Therefore, the expectation maximization algorithm was used to impute missing data using all information available from observations on the other model variables.

Next, a multiple regression model was tested, using AMOS (v. 25) (Arbuckle, 2017a), to analyze the associations between children's sex and age, mothers' educational level, parental educational aspirations for the child, and parental involvement in preschool formal and informal events and frequency of adult-child home SBR, with all participating mothers. Parental involvement in preschool formal and informal events were allowed to correlate in the model. Then, to test the moderating role of ethnicity, a multiple group analysis with AMOS (v. 25) (Arbuckle, 2017a) was performed. An unconstrained multiple group model, with all paths allowed to be freely estimated across Roma and non-Roma low-income participants, was compared to a model

where all paths were constrained to be equivalent across both groups. To evaluate model fit, the following fit indexes and criteria were used: Non-significant chi-square ($p < .05$), the relative χ^2 index (χ^2/df) values ≤ 2 (Arbuckle, 2017b), the comparative fit index (CFI) and the goodness of fit index (GFI) approaching 1, the root mean square error of approximation (RMSEA) < 0.05 , and the standardized root mean residual (SRMR) < 0.08 (Hu & Bentler, 1999; Schreiber et al., 2006), as indicative of a good fit.

3 Results

3.1 Descriptive statistics, correlations, and mean differences between groups

The means, standard deviations, minimum and maximum, and correlations among study variables are presented in Tables 2 and 3. In both groups, positive though modest zero-order correlations were found between mothers' educational aspirations for their child and home SBR (stronger for the Roma group), and between parental involvement in preschool formal and informal events. In the non-Roma group only, mothers' education was negatively correlated with parental involvement in preschool formal events, and parental involvement in preschool informal events was positively correlated with the frequency of home SBR (see Table 3).

Regarding frequency of home SBR, 6.8% of participants in this study (6% of Roma and 7.7% of non-Roma) reported reading to their preschool-aged children *every day*, with no statistically significant differences found between the two groups. An independent-samples *t*-test revealed significant differences between the Roma and the non-Roma low-income groups regarding mothers' educational level, $t(195) = -9.40$, $p < .001$, $d = -1.35$, and parental involvement in informal preschool events, $t(204) = -3.74$, $p < .001$, $d = -0.53$. Specifically, non-Roma mothers had more years of education and presented higher levels of parental involvement in preschool informal events than Roma mothers. For the remaining variables, no significant differences between groups were found (see Table 2).

Table 2 Descriptive statistics of model variables for the Roma and non-Roma low-income groups

	Roma (low-income)				Non-Roma (low-income)			
	<i>M</i>	<i>SD</i>	Min	Max	<i>M</i>	<i>SD</i>	Min	Max
1. Sex (child)	1.54	0.50	1	2	1.51	0.50	1	2
2. Age (child)	5.00	0.90	3	6	4.92	0.99	3	6
3. Mothers' educational level	4.25	2.25	0	12	7.46	2.51	2	15
4. Mothers' educational aspirations for child	3.32	1.61	1	5	3.64	1.25	1	5
5. Involvement (formal) in preschool events	2.12	0.80	1	5	2.20	0.80	1	5
6. Involvement (informal) in preschool events	1.69	0.58	1	3	2.04	0.73	1	5
7. Home shared book reading	3.22	1.45	1	6	3.59	1.36	1	6

Participants were mothers (97%). Child's father ($n = 2$) or a female main caregiver (e.g., grandmother; $n = 4$) participated when the mother was not the main caregiver or was not involved in the child's life. Values in bold highlight significant differences between Roma and non-Roma low-income groups (*t*-test analysis). The variable *Sex (child)* was coded as 1 = Female and 2 = Male

Table 3 Bivariate correlations among model variables for the Roma and non-Roma low-income groups

	1	2	3	4	5	6	7
1. Sex (child)	–	.18	–.01	–.08	.12	–.13	–.16
2. Age (child)	.05	–	.02	.19	.17	–.02	.12
3. Mothers' educational level	.05	–.18	–	.13	–.30**	–.09	.18
4. Mothers' educational aspirations for child	.17	.03	–.05	–	.11	–.04	.22*
5. Involvement (formal) in preschool events	–.01	–.08	.02	.08	–	.25*	.08
6. Involvement (informal) in preschool events	–.00	.04	.01	–.03	.21*	–	.20*
7. Home shared book reading	–.05	.08	.12	.32**	.12	.11	–

Values in the table refer to Pearson correlation coefficients. Coefficients above the diagonal refer to the non-Roma group and coefficients below the diagonal refer to the Roma group

* $p < .05$. ** $p < .01$

3.2 Predicting frequency of home SBR

The model examining the associations between children's age and sex, mothers' educational level, parental educational aspirations for the child and involvement in preschool formal and informal events, and frequency of home SBR presented good fit statistics, $\chi^2(14) = 19.149$, $p = .159$; $\chi^2/df = 1.368$; CFI = .89; GFI = .97; RMSEA = .042; SRMR = .055. Model results revealed that the frequency of home SBR was significantly predicted by mothers' educational aspirations for their child, $b = 0.27$, $p < .001$, parental involvement in preschool informal events, $b = 0.15$, $p = .011$, and mothers' educational level, $b = 0.16$, $p = .017$. That is, higher educational aspirations of the mother towards the child, higher levels of parental involvement in preschool informal events, and more years of formal education were associated with a higher frequency of home SBR activities (Fig. 1).¹

3.2.1 The moderating role of ethnic group

The multiple group model analyzing the moderating role of ethnic group showed a non-significant chi-square difference between the unconstrained and the constrained models: $\Delta \chi^2(6) = 1.13$, $p = .980$, indicating that the overall model does not vary significantly between the Roma and non-Roma low-income groups.

¹ Given the cross-sectional nature of the data, we tested an alternative model specifying SBR as a predictor of mother's educational aspirations for their child, while including the same covariates (children's age, sex, mother's educational level, and parental involvement in preschool formal and informal events). Based on model modification indices and existing empirical evidence, SBR and mother's educational level were allowed to covary. Results from this model revealed that SBR does predict educational aspirations, $b = .28$, $p < .001$. However, the comparison of the fit indexes of both models showed that the hypothesized model fit the data better ($\chi^2 = 19.15$, $df = 14$, $\chi^2/df = 1.37$, CFI = .89, GFI = .97, RMSEA = .04, SRMR = .06, AIC = 47.15, BIC = 93.74) than this alternative model ($\chi^2 = 24.38$, $df = 13$, $\chi^2/df = 1.88$, CFI = .75, GFI = .97, RMSEA = .07, SRMR = .07, AIC = 54.38, BIC = 104.30).

4 Discussion

As part of a broader research project addressing educational inequalities, in this study we analyzed the associations between mother and child characteristics, parental educational aspirations for the child and parental involvement in preschool events, and frequency of home SBR (a component of the HLE) in Portuguese Roma and non-Roma low-income families of preschoolers. To fully understand families' HLE, a holistic and comprehensive approach is needed (Leseman & de Jong, 1998). This study expanded the literature on SBR, by going beyond child and family sociodemographic predictors and investigating the role of parental beliefs and mesosystemic links between the family and the preschool (Bronfenbrenner & Morris, 2006), as well as the role of ethnicity in a predominantly low-income sample.

We found relatively low frequency of home SBR for both Roma and non-Roma low-income mothers of preschoolers, compared to similar studies which have considered mainly low-income ethnically diverse families (Yarosz & Barnett, 2001). Although frequent SBR may improve reading skills of preschoolers in Portuguese families with lower (but not higher) educational level (Araújo & Costa, 2015), we found low frequency of SBR in low-income families, compared to previous findings in higher SES Portuguese families (Gomes & Vale-Dias, 2017). Consistent with previous evidence (Hartas, 2011), our finding is likely to be associated with lower literacy skills linked to the low educational levels found, particularly among Roma mothers (Mendes & Magano, 2016). We note, however, that there is some evidence that other home literacy practices are used by these families (Mendes, 2012), such as storytelling and conversations with children. Also, it may be that in predominantly low-income families, involvement in other literacy practices such as training (e.g., saying the letters' name) is more usual than involvement in entertainment (e.g., SBR) or everyday (e.g., reading packaging text) practices, as seen in Portuguese families of higher SES (e.g., Gomes & Vale-Dias, 2017; Pacheco & Mata, 2013; Salvador & Martins, 2017). Future research may consider examining other literacy practices in mainly low-SES families.

Contrary to our hypotheses (H1 and H2), and different from previous studies (Hayes et al., 2018; Yarosz & Barnett, 2001), we did not find associations between children's age and sex and frequency of home SBR. Regarding age, as all mothers reported on children between 3 and 6 years old, it is likely that frequency of SBR is relatively stable during the preschool period. Regarding sex, we expected higher frequency of SBR for girls, which was not the case. Considering Roma families, this finding may suggest that educational goals for boys and girls in the preschool years are relatively similar, with traditional gender-related differences in educational goals and practices (Mendes et al., 2014) becoming more pronounced later. It can also reflect current changes in the Portuguese Roma families' mindset regarding the education of young girls (Magano & Mendes, 2016).

Not surprisingly, mother's educational level was positively associated with the frequency of home SBR, confirming H3. We found increased levels of maternal education related to more frequent parent-child home SBR. This finding adds to the vast literature supporting this effect (e.g., Araújo & Costa, 2015; Gottfried et al., 2015; Hartas, 2011; Kuo et al., 2004), particularly in low-SES families (Froiland

et al., 2013; Yarosz & Barnett, 2001). Namely, it supports previous findings that in predominantly low-income families, mothers' education is an important correlate of children's exposure to SBR (Froiland et al., 2013; Raikes et al., 2006). Importantly, our findings expand existing evidence by showing that this effect is consistent across minority (Roma) and majority (non-Roma) low-income families.

Moreover, as expected (H4), higher parental educational aspirations for the child were positively associated with frequency of home SBR, which is consistent with previous studies (Froiland et al., 2012), namely with ethnic minorities (Davis-Kean, 2005). This finding adds to existing literature on parental beliefs and home literacy, shedding light on the importance of considering more general beliefs regarding children's future education, and not only specific beliefs on children's abilities and/or parental roles in learning to read (Pacheco & Mata, 2013; Weigel et al., 2006). It is worth noting that Portuguese Roma families living in the Metropolitan Areas of Lisbon and Oporto seem to have higher educational aspirations for their children than families living in other areas of the country (Magano & Mendes, 2016; Mendes et al., 2014).

Parental involvement in informal, but not formal, events at preschool was positively associated with the frequency of home SBR, partially confirming H5. Previous studies have highlighted the importance of the quality of home-preschool relationships in enhancing children's skills, namely in reading and literacy (Galindo & Sheldon, 2012). To some extent, our findings align well with Murray et al.'s (2015) report that parents' involvement in home learning activities was associated with increased parental involvement in preschool, higher attendance of preschool events, and communication with other families, more than with contact and interaction with educators. Thus, family participation in preschool events involving informal contacts with the preschool community and other families, may contribute to increased involvement in learning activities with children at home, such as SBR, in Roma and non-Roma low-income families. Informal events at school are likely to strengthen positive relationships among families, fostering mutual support and providing opportunities for sharing information, thus shaping behavioral expectations regarding educational practices at home (Goodall & Montgomery, 2014). This finding may, therefore, reflect processes of positive social influence associated with perceived involvement of other parents from the community (i.e., neighbors or friends; Bracke & Corts, 2012). It is also possible, however, that preschools that promote more informal events for families are different from those that do not. Increased involvement in such events may, therefore, function as a proxy for increased levels of parental trust. Extant research has, indeed, established links between parental trust in teachers and parent educational involvement (Santiago et al., 2016).

Importantly, we found a significant difference between Roma and non-Roma low-income parents' involvement in preschool informal events, with Roma parents participating significantly less than non-Roma. Consistent with previous evidence (Frew et al., 2012), this difference may reflect a mismatch between Roma and school cultures (Casa-Nova, 2006; Lopes & Costa, 2016) or decreased levels of trust in schools and school staff (Santiago et al., 2016). Importantly, it shows that there is room to increase Roma families' participation in such events and increase their potential benefits.

The non-significant effect of families' involvement in formal preschool events on frequency of home SBR suggests the need for Portuguese preschools to rethink

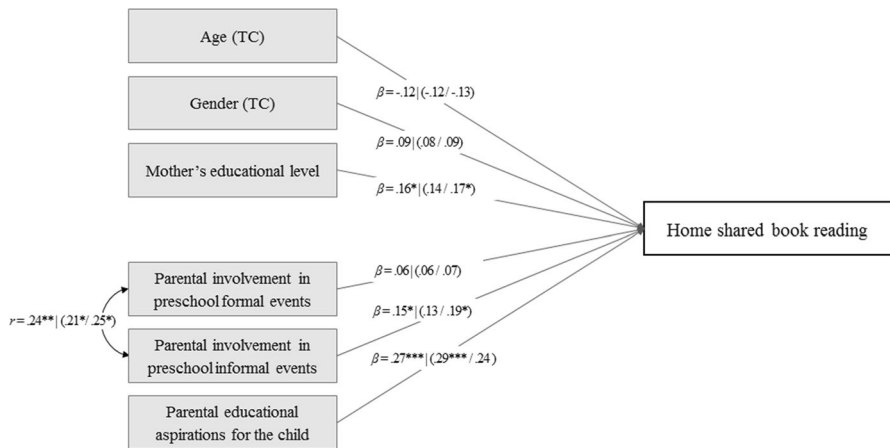


Fig. 1 Predictive model examining the associations between child and mother characteristics, parental educational aspirations for the child, and parental involvement in preschool events, and the frequency of home SBR, considering ethnic group as a moderator. Estimates for the whole sample model and the moderation model are presented in the figure according to the following scheme: Whole sample | (Roma/ non-Roma). * $p < .05$. ** $p < .01$. *** $p < .001$

the main strategies currently used to promote parents' involvement, especially if the goal is to foster parental involvement in learning activities at home (Galindo & Sheldon, 2012). More than parent-teacher conferences, social events for families which allow for more informal involvement of parents in convivial settings, with informal interactions with school staff and other families, might help increase home-based involvement and, more specifically, the frequency of SBR.

Importantly, contrary to our hypothesis (H6), ethnicity did not moderate the associations between child and mother's characteristics, parental educational aspirations and involvement in preschool, and the frequency of home SBR. While unexpected, this finding is in line with previous studies suggesting that families living in disadvantaged areas may be exposed to similar social and educational challenges and opportunities (Aikens & Barbarin, 2008; Garbarino & Sherman, 1980). This may be driven by the fact that both Roma and non-Roma participants in this study were from low-income families living in the same disadvantaged communities. It may be that, more than ethnicity, it was the families' low SES that contributed to the low frequency of SBR found in this study. This would be in line with a previous study that found a positive association between families' SES and frequency of SBR in an ethnically diverse sample (Barnes & Puccioni, 2017).

4.1 Limitations and strengths

Although this study adds to family literacy research, particularly within the European context, it has some limitations that should be addressed. First, we focused on the two major metropolitan areas in Portugal, one in the south and one in the north

of the country, but both coastal, and findings may not be generalized to rural areas and to the interior of the country. We know, for example, that educational aspirations of Roma families in these metropolitan areas seem to be higher than in other regions of the country (Magano & Mendes, 2016; Mendes et al., 2014).

Second, similar to previous studies on literacy practices in families of minority and majority groups (e.g., Baker, 2013), we assessed mainly mothers' perspectives. Although this may be a limitation, findings from a previous study with Roma and non-Roma families suggest a high correlation between mother and father reports on educational aspirations for their children (Dimitrova et al., 2018).

Third, the correlational and cross-sectional design of this study precludes causality claims. Thus, future studies should use longitudinal designs to effectively test the order of effects hypothesized in this study. Moreover, other variables not examined in this study, namely within the family microsystem (e.g., home environment aspects such as the number of books in the household) and in the exosystem (e.g., access and use of public libraries) may also contribute to home SBR.

Fourth, we also did not examine specific parental attitudes or beliefs on the relevance of reading and other literacy practices for children, contrary to previous research (Evans et al., 2004; Resende & Figueiredo, 2018; Weigel et al., 2006). While this may be a limitation, our study adds to the literature by accounting for more general beliefs on children's future attainment and showing that these are associated with frequency of SBR.

Fifth, all variables, including frequency of home SBR, were measured through self-report data, which may reflect social desirability and can be considered less reliable than home observations, for instance (Resende & Figueiredo, 2018). In this case, we used online self-reports, which are low cost, easy to use, and have advantages regarding data storage and control for missing data (Gosling et al., 2004; Lonsdale et al., 2006). Importantly, participants answered the self-report survey in face-to-face meetings, with the support of experienced researchers. In addition, most previous studies on the frequency of home SBR are also based on self-report data (e.g., Celano et al., 1998; Kuo et al., 2004; Yarosz & Barnett, 2001) and there is evidence suggesting that self-report information may appropriately represent actual reading behaviors (Gilkerson et al., 2015). Nevertheless, future research on the frequency of home SBR in similar samples could consider the use of additional measures, such as young children's reports (Evans & Hulak, 2020). Other measures, such as author recognition checklists (Davidse et al., 2011; Sénéchal & LeFevre, 2014) although useful complements to parental reports in analyzing SBR frequency, should be used with caution in similar samples, considering cultural sensitivity issues.

Sixth, our design does not allow us to disentangle the effects of ethnicity and income or low SES. To clarify this, further studies should also consider comparing low and high-SES families. Notwithstanding, the fact that both groups in this study had low frequency of home SBR suggests the need for interventions to promote literacy skills and habits in these families.

Seventh, the models tested in this study explained a limited amount of variance in frequency of SBR among Portuguese Roma (17%) and non-Roma (14%) low-income families (15% in the overall sample). This suggests the need to account for other factors, namely child (e.g., temperament, pre-literacy skills), mother (e.g.,

parental stress, self-efficacy²), family (e.g., age of older child in household), and context-related (e.g., number of books in the household, access to libraries) characteristics in future analyses of the predictors of frequency of home SBR.

Finally, this study addressed frequency but not quality of home SBR. Several family literacy studies, since the early 2000's, have highlighted the effect of quality (i.e., nature and richness of dyadic interactions and their affective experience) over the effect of quantity (i.e., frequency) of adult–child SBR on children's literacy development (Lefebvre et al., 2011; Mol et al., 2009). Some have also suggested that SBR frequency and quality may be intertwined and bidirectionally related (Bus et al., 1995; Fletcher & Reese, 2005). However, the strong effect of SBR frequency on child literacy is well documented (Shahaeian et al., 2018; Silinskas et al., 2012) and therefore home SBR frequency was considered in this study. Nonetheless, further studies might consider using combined measures of frequency and quality, for a richer approach, since a continuous and spiral effect is suggested, in that early involvement in SBR promotes language and literacy skills development, which increases quality of SBR that, in turn, induces frequent SBR, and so forth (Pomerantz et al., 2007; Raikes et al., 2006).

Importantly, the main strength of this study is its valuable focus on the Roma, a rarely studied, deeply underrepresented ethnic minority group, while also doing so in a Southern European country. Thus, we focused on the frequency of home SBR as an important feature of the family context, while acknowledging the latter as a cultural microsystem (see Vélez-Agosto et al., 2017). Another strength is the consideration of variables that go beyond child and family sociodemographic characteristics, including mesosystemic connections between home and preschool (Bronfenbrenner & Morris, 2006), and parental educational aspirations for the child as predictors of frequency of SBR, thus adding to existing literature on family literacy (Froiland et al., 2013; Gamelas et al., 2003; Kuo et al., 2004; Yarosz & Barnett, 2001). Further, this study adds to the relatively few international studies on family literacy practices, particularly frequency of SBR, as an outcome (Kuo et al., 2004; Yarosz & Barnett, 2001), unlike most previous studies (e.g., Hayes et al., 2018; Silinskas et al., 2012). Another innovative aspect of this study was the analysis of the potential moderating role of ethnicity, considering two groups of disadvantaged families, namely Portuguese (minority) Roma and (majority) non-Roma low-income. To the best of our knowledge, this is the first study examining these associations in Roma families, nationally and internationally.

5 Conclusions

The major finding of our study is the similar pattern of predictors of frequency SBR found in the Portuguese Roma and non-Roma samples, which may provide important insights for practice in this field. For example, Roma and non-Roma

² Self-efficacy data was collected in this study but not tested in the model due to unsatisfactory psychometric characteristics in our sample.

families living in the same (or comparable) deprived urban areas may experience similar challenges in mobilizing resources to engage in home literacy activities such as SBR with their preschool children. Therefore, even though tailored interventions for Roma families may be relevant, our findings suggest that both groups of families may benefit from similar interventions aiming to increase the frequency of home SBR. Findings further indicate that such interventions should consider the multiple levels of the context that help predict home SBR, including individual variables that are key in shaping children's educational experiences in their microsystems (i.e., mothers' education and academic aspirations for their children) and selected features of the mesosystem (i.e., parental involvement in informal preschool activities). Thus, possible interventions may include informal activities in preschool for families (e.g., storytelling coffee/tea meetings) or activities with examples of successful students from the local community or members of comparable vulnerable socioeconomic communities.

Acknowledgements This work was supported by the European Union's Horizon 2020 research and innovation program under grant agreement No. 727069. More information on the large-scale structured interview study can be found in Broekhuizen and colleagues (2018). The authors would like to thank the ISO-TIS partners who were in some way involved in this study, as well as to Dulce Martins and to João Rafael, who were part of the data collection team in this study. A special thank you to all institutions (namely *Santa Casa da Misericórdia de Lisboa* and *Santa Casa da Misericórdia da Amadora*, with which we established a formal collaboration, amongst other institutions), schools and professionals (such as local community mediators) within the Metropolitan Areas of Lisbon and Oporto who supported us in reaching out and contacting with participant families, and/or providing the conditions for conducting some of the interviews with the families. Finally, we are grateful to all mothers and other primary caregivers who participated in this study, by so kindly sharing their experiences and perspectives.

Author contributions Conceptualization: CA, IAF, LN, SG, and CSS; Methodology: CA, and IAF; Formal analysis and investigation: IAF and CSS; Investigation: IAF, SG, LN, CSS, and CA; Writing—original draft preparation: IAF, CSS, LN, and SG; Writing—review and editing: CA, IAF, SG, LN, and CSS; Supervision: CA; Funding acquisition: CA; Resources: CA; Project administration: CA.

Funding This work was supported by the European Union's Horizon 2020 research and innovation program under grant agreement No. 727069.

Declarations

Conflict of interest The authors have no conflicts of interest to declare that are relevant to the content of this article.

Ethical approval This study was approved by the Ethics Committee of ISCTE-IUL (Parecer 21/2017), as well as by the Portuguese Data Protection Authority (No. 10512/2017). The procedures used in this study adhere to the tenets of the Declaration of Helsinki.

Consent to participate Informed consent was obtained from all individual participants included in the study.

Consent for publication Informed consent was obtained from all individual participants for whom identifying information is included in this article.

References

- Aikens, N. L., & Barbarin, O. (2008). Socioeconomic differences in reading trajectories: The contribution of family, neighborhood, and school contexts. *Journal of Educational Psychology, 100*(2), 235–251. <https://doi.org/10.1037/0022-0663.100.2.235>.
- Araújo, L., & Costa, P. (2015). Home book reading and reading achievement in EU countries: The progress in international reading literacy study 2011 (PIRLS). *Educational Research and Evaluation, 21*(5–6), 422–438. <https://doi.org/10.1080/13803611.2015.1111803>.
- Arbuckle, J. L. (2017a). *Amos (Version 25.0)* [Computer Program]. Chicago, IL: IBM SPSS.
- Arbuckle, J. L. (2017b). *IBM SPSS Amos 25 User's Guide*. SPSS Inc., Development Corporation.
- Arnold, D. H., Zeljo, A., Doctoroff, G. L., & Ortiz, C. (2008). Parent Involvement in preschool: Predictors and the relation of involvement to preliteracy development. *School Psychology Review, 37*(1), 74–90. <https://doi.org/10.1080/02796015.2008.12087910>
- Arqueiro, A., Cunha, J., Garbe, C., Lafontaine, D., Dionísio, M. L., Shiel, G. & Valtin, R. (2016). (Eds.) *Literacy in Portugal: Country report. Children and adolescents*. European Literacy Policy Network (ELINET).
- Baker, C. E. (2013). Fathers' and mothers' home literacy involvement and children's cognitive and social emotional development: Implications for family literacy programs. *Applied Developmental Science, 17*(4), 184–197. <https://doi.org/10.1080/10888691.2013.836034>
- Baker, L., Scher, D., & Mackler, K. (1997). Home and family influences on motivations for reading. *Educational Psychologist, 32*(2), 69–82. https://doi.org/10.1207/s15326985ep3202_2
- Barnes, E., & Puccioni, J. (2017). Shared book reading and preschool children's academic achievement: Evidence from the early childhood longitudinal study—birth cohort. *Infant and Child Development, 26*(6), e2035. <https://doi.org/10.1002/icd.2035>
- Baucal, A. (2006). Development of mathematical and language literacy among Roma students. *Psihologija, 39*(2), 207–227. <https://doi.org/10.2298/PSI0602207B>
- Biro, M., Smederevac, S., & Tovilović, S. (2009). Socioeconomic and cultural factors of low scholastic achievement of Roma children. *Psihologija, 42*(3), 273–288. <https://doi.org/10.2298/PSI0903273B>
- Boonk, L., Gijsselaers, H. J. M., Ritzen, H., & Brand-Gruwel, S. (2018). A review of the relationship between parental involvement indicators and academic achievement. *Educational Research Review, 24*, 10–30. <https://doi.org/10.1016/j.edurev.2018.02.001>
- Bracke, D., & Corts, D. (2012). Parental involvement and the Theory of Planned Behavior. *Education, 133*(1), 188–201.
- Bracken, S. S., & Fischel, J. E. (2008). Family reading behavior and early literacy skills in preschool children from low-income backgrounds. *Early Education and Development, 19*(1), 45–67. <https://doi.org/10.1080/10409280701838835>
- Broekhuizen, M., Ereky-Stevens, K., Wolf, R., & Moser, T. (2018). *Technical report parent structured interview study. Procedures, instrument development, samples, and showcases*. Retrieved from <http://www.isotis.org/resources/publications/isotis-publications/final>.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (pp. 793–828). Wiley. <https://doi.org/10.1002/9780470147658.chpsy0114>
- Buchmann, C., & Dalton, B. (2002). Interpersonal influences and educational aspirations in 12 countries: The importance of institutional context. *Sociology of Education, 75*(2), 99–122.
- Bus, A. G., van Ijzendoorn, M. H., & Pellegrini, A. D. (1995). Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research, 65*(1), 1–21. <https://doi.org/10.3102/00346543065001001>
- Cadima, J., Gamelas, A. M., McClelland, M., & Peixoto, C. (2015). Associations between early family risk, children's behavioral regulation, and academic achievement in Portugal. *Early Education and Development, 26*(5–6), 708–728. <https://doi.org/10.1080/10409289.2015.1005729>
- Cadima, J., McWilliam, R. A., & Leal, T. (2010). Environmental risk factors and children's literacy skills during the transition to elementary school. *International Journal of Behavioral Development, 34*(1), 24–33. <https://doi.org/10.1177/0165025409345045>
- Casa-Nova, M. J. (2006). A relação dos ciganos com a escola pública: Contributos para a compreensão sociológica de um problema complexo e multidimensional [Gypsies' relationship with public school: Contributes for the sociological understanding of a complex and multidimensional problem]. *Revista Interações, 2*, 155–182. Retrieved from <http://hdl.handle.net/1822/7915>.

- Celano, M., Hazzard, A., McFadden-Garden, T., & Swaby-Ellis, D. (1998). Promoting emergent literacy in a pediatric clinic: Predictors of parent-child reading. *Children's Health Care*, 27(3), 171–183. https://doi.org/10.1207/s15326888chc2703_3
- Clavell-Bate, R. (2012). Elective home education: Supporting access to education for children and young people within the Gypsy, Roma and Traveller community. In J. Visser, H. Daniels, & T. Cole (Eds.), *Transforming troubled lives: Strategies and interventions for children with social, emotional and behavioural difficulties* (pp. 175–191). Emerald Group Publishing. [https://doi.org/10.1108/S1479-3636\(2012\)0000002014](https://doi.org/10.1108/S1479-3636(2012)0000002014)
- Dandy, J., & Nettelbeck, T. (2002). A cross-cultural study of parents' academic standards and educational aspirations for their children. *Educational Psychology*, 22(5), 621–627. <https://doi.org/10.1080/0144341022000023662>
- Davidse, N. J., de Jong, M. T., Bus, A. G., Huijbregts, S. C., & Swaab, H. (2011). Cognitive and environmental predictors of early literacy skills. *Reading and Writing*, 24(4), 395–412. <https://doi.org/10.1007/s11145-010-9233-3>
- Davis-Kean, P. E. (2005). The influence of parent education and family income on child achievement: The indirect role of parental expectations and the home environment. *Journal of Family Psychology*, 19(2), 294–304. <https://doi.org/10.1037/0893-3200.19.2.294>
- Dearing, E., Kreider, H., Simpkins, S., & Weiss, H. B. (2006). Family involvement in school and low-income children's literacy: Longitudinal associations between and within families. *Journal of Educational Psychology*, 98(4), 653–664. <https://doi.org/10.1037/0022-0663.98.4.653>
- Dimitrova, R., Ferrer-Wreder, L., & Ahlen, J. (2018). School climate, academic achievement and educational aspirations in Roma minority and Bulgarian majority adolescents. *Child & Youth Care Forum*, 47, 645–658. <https://doi.org/10.1007/s10566-018-9451-4>
- Doe, J. (2019). Early Childhood Education and Care. Retrieved from https://eacea.ec.europa.eu/national-policies/eurydice/content/early-childhood-education-and-care-60_en.
- Dolean, D., Tincas, I., & Damsa, C. I. (2016). Enhancing the pre-literacy skills of Roma children: The role of socio-economic status and classroom interventions in the development of phonemic awareness. *The New Educational Review*, 45(3), 39–52. <https://doi.org/10.15804/tner.2016.45.3.03>.
- Englund, M. M., Luckner, A. E., Whaley, G. J., & Egeland, B. (2004). Children's achievement in early elementary school: Longitudinal effects of parental involvement, expectations, and quality of assistance. *Journal of Educational Psychology*, 96(4), 723. <https://doi.org/10.1037/0022-0663.96.4.723>
- Direção-Geral de Estatísticas da Educação e Ciência. (2017). Perfil Escolar das Comunidades Ciganas [XLSX]. Retrieved from <https://www.dgeec.mec.pt/np4/906.html>.
- Direção-Geral de Estatísticas da Educação e Ciência. (2018). Estatísticas da Educação 2017/2018. [Statistics of Education 2017/2018]. Retrieved from [https://www.dgeec.mec.pt/np4/96/%7B\\$cientServletPath%7D/?newsId=145&fileName=DGEEC_DSEE_2019_EE20172018_201907121.pdf](https://www.dgeec.mec.pt/np4/96/%7B$cientServletPath%7D/?newsId=145&fileName=DGEEC_DSEE_2019_EE20172018_201907121.pdf).
- Direção-Geral de Estatísticas da Educação e Ciência. (2019). Educação em números – Portugal 2019 [Education in numbers – Portugal 2019]. Retrieved from [http://www.dgeec.mec.pt/np4/96/%7B\\$cientServletPath%7D/?newsId=145&fileName=DGEEC_EN2019_201718.pdf](http://www.dgeec.mec.pt/np4/96/%7B$cientServletPath%7D/?newsId=145&fileName=DGEEC_EN2019_201718.pdf).
- European Union Agency for Fundamental Rights (FRA). (2016). *Second European Union minorities and discrimination survey: Roma – Selected findings*. Publications Office of the European Union. <https://doi.org/10.2811/469>.
- Evans, M. A., Fox, M., Cremasco, L., & McKinnon, L. (2004). Beginning reading: The views of parents and teachers of young children. *Journal of Educational Psychology*, 96(1), 130. <https://doi.org/10.1037/0022-0663.96.1.130>
- Evans, M. A., & Hulak, L. (2020). Learning to read at home: Kindergarten children's report in relation to observed parent behaviour. *Early Childhood Research Quarterly*, 50, 38–45. <https://doi.org/10.1016/j.ecresq.2018.09.010>
- Evans, M. A., & Shaw, D. (2008). Home grown for reading: Parental contributions to young children's emergent literacy and word recognition. *Canadian Psychology/psychologie Canadienne*, 49(2), 89–95. <https://doi.org/10.1037/0708-5591.49.2.89>
- Farrant, B. M., & Zubrick, S. R. (2013). Parent-child book reading across early childhood and child vocabulary in the early school years: Findings from the Longitudinal Study of Australian Children. *First Language*, 33(3), 280–293. <https://doi.org/10.1177/0142723713487617>.
- Ferreira, T. L. (Ed.). (2014). *Caracterização das condições de habitação das comunidades ciganas residentes em Portugal* [Characterization of the housing conditions of the Roma communities living in Portugal]. Instituto da Habitação e da Reabilitação Urbana, I.P. Retrieved from <http://www.porta>

ldahabitacao.pt/opencms/export/sites/portal/pt/portal/publicacoes/documentos/caraterizacao_condicoes_habitacao.pdf

- Fletcher, K. L., & Reese, E. (2005). Picture book reading with young children: A conceptual framework. *Developmental Review*, 25(1), 64–103. <https://doi.org/10.1016/j.dr.2004.08.009>
- Frew, L. A., Zhou, Q., Duran, J., Kwok, O., & Benz, M. R. (2012). Effect of school-initiated parent outreach activities on parent involvement in school events. *Journal of Disability Policy Studies*, 24(1), 27–35. <https://doi.org/10.1177/1044207311427163>
- Froiland, J. M., Peterson, A., & Davison, M. L. (2012). The long-term effects of early parent involvement and parent expectation in the USA. *School Psychology International*, 34(1), 33–50. <https://doi.org/10.1177/0143034312454361>
- Froiland, J. M., Powell, D. R., Diamond, K. E., & Son, S. H. C. (2013). Neighborhood socioeconomic well-being, home literacy, and early literacy skills of at-risk preschoolers. *Psychology in the Schools*, 50(8), 755–769. <https://doi.org/10.1002/pits.21711>
- Galindo, C., & Sheldon, S. B. (2012). School and home connections and children's kindergarten achievement gains: The mediating role of family involvement. *Early Childhood Research Quarterly*, 27(1), 90–103. <https://doi.org/10.1016/j.ecresq.2011.05.004>
- Gamelas, A. M., Leal, T., Alves, M. J., & Grego, T. (2003). Contributos para o desenvolvimento da literacia – Clube de Leitura [Contributes to the development of literacy - Reading Club]. In F. Viana, M. Martins, & E. Coquet (Eds.), *Leitura, Literatura Infantil e Ilustração: Investigação e prática docente* (pp. 33–41). Centro de Estudos da Criança da Universidade do Minho.
- Garbarino, J., & Sherman, D. (1980). High-risk neighborhoods and high-risk families: The human ecology of child maltreatment. *Child Development*, 51(1), 188–198. <https://doi.org/10.2307/1129606>
- Gilkerson, J., Richards, J. A., & Topping, K. J. (2015). The impact of book reading in the early years on parent-child language interaction. *Journal of Early Childhood Literacy*, 17(1), 92–110. <https://doi.org/10.1177/1468798415608907>
- Gomes, M. B. S. H., & Vale-Dias, M. L. (2017). A Literacia emergente no contexto familiar: o estudo de crenças e práticas de literacia junto de pais de crianças em idade pré-escolar [Emerging Literacy in the family context: the study of literacy beliefs and practices among parents of pre-school children]. *Journal of Child and Adolescent Psychology*, 8(2). Retrieved from <http://revistas.lis.ulisiada.pt/index.php/rpca/article/view/2581>
- Goodall, J., & Montgomery, C. (2014). Parental involvement to parental engagement: A continuum. *Educational Review*, 66(4), 399–410. <https://doi.org/10.1080/00131911.2013.781576>
- Gosling, S. D., Vazire, S., Srivastava, S., & John, O. P. (2004). Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires. *American Psychologist*, 59(2), 93–104. <https://doi.org/10.1037/0003-066X.59.2.93>
- Gottfried, A. W., Schlackman, J., Gottfried, A. E., & Boutin-Martinez, A. S. (2015). Parental provision of early literacy environment as related to reading and educational outcomes across the academic lifespan. *Parenting*, 15(1), 24–38. <https://doi.org/10.1080/15295192.2015.992736>
- Gutman, L. M., & Akerman, R. (2008). *Determinants of aspirations* (Research Report No. 27). Centre for Research on the Wider Benefits of Learning, Institute of Education, University of London. Retrieved from <http://discovery.ucl.ac.uk/1541614/>
- Hartas, D. (2011). Families' social backgrounds matter: Socio-economic factors, home learning and young children's language, literacy and social outcomes. *British Educational Research Journal*, 37(6), 893–914. <https://doi.org/10.1080/01411926.2010.506945>
- Hayes, N., Berthelsen, D. C., Nicholson, J. M., & Walker, S. (2018). Trajectories of parental involvement in home learning activities across the early years: Associations with socio-demographic characteristics and children's learning outcomes. *Early Child Development and Care*, 10, 1405–1418. <https://doi.org/10.1080/03004430.2016.1262362>
- Herbers, J. E., Cutuli, J. J., Supkoff, L. M., Heistad, D., Chan, C. K., Hinz, E., & Masten, A. S. (2012). Early reading skills and academic achievement trajectories of students facing poverty, homelessness, and high residential mobility. *Educational Researcher*, 41(9), 366–374. <https://doi.org/10.3102/0013189X12445320>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modelling: A Multidisciplinary Journal*, 6(1), 1–55. <https://doi.org/10.1080/10705519909540118>
- IBM Corp. (2017). *IBM SPSS Statistics for Windows*, Version 25.0. Armonk, NY: IBM Corp.

- Inoue, T., Georgiou, G. K., Parrila, R., & Kirby, J. R. (2018). Examining an extended home literacy model: The mediating roles of emergent literacy skills and reading fluency. *Scientific Studies of Reading*, 22(4), 273–288. <https://doi.org/10.1080/10888438.2018.1435663>
- Kassow, D. Z. (2006). Parent-child shared book reading: Quality versus quantity of reading interactions between parents and young children. *Talaris Research Institute*, 1(1), 1–9. Retrieved from <http://www.earlylit.net/early-literacy-research>.
- Kline, R. (2011). *Principles and practice of structural equation modelling* (3rd ed.). Guilford Press.
- Kuo, A. A., Franke, T. M., Regalado, M., & Halfon, N. (2004). Parent report of reading to young children. *Pediatrics*, 113(5), 1944–1951. Retrieved from https://pediatrics.aappublications.org/content/113/Supplement_5/1944.
- Kyuchukov, H. (2006). Early home literacy of Roma children in Bulgaria. *Education Et Sociétés Plurilingues*, 20, 51–62.
- Law No. 4/97 of the Republic Assembly [Lei no. 4/97 da Assembleia da República] (1997). Diário da República: I série A no. 34 – 10 de Fevereiro de 1997: 670 - 673. Retrieved from <https://dre.pt/application/conteudo/561219>.
- Lauritzen, S. M., & Nodeland, T. S. (2018). “What is the problem represented to be?” Two decades of research on Roma and education in Europe. *Educational Research Review*, 24, 148–169. <https://doi.org/10.1016/j.edurev.2018.04.002>
- Leal, T., Peixoto, C., Silva, M., & Cadima, J. (2006). Desenvolvimento da literacia emergente: competências em crianças de idade pré-escolar [Development of emergent literacy: Competences in pre-school-aged children]. In: *Actas do 6.º Encontro Nacional (4.º Internacional) de Investigação em Leitura, Literatura Infantil e Ilustração*, Braga, Portugal, 13–14 October 2006, pp. 56–65, Braga: Universidade do Minho.
- Lefebvre, P., Trudeau, N., & Sutton, A. (2011). Enhancing vocabulary, print awareness and phonological awareness through shared storybook reading with low-income preschoolers. *Journal of Early Childhood Literacy*, 11(4), 453–479. <https://doi.org/10.1177/1468798411416581>
- Leseman, P. P. M., & de Jong, P. F. (1998). Home literacy: Opportunity, instruction, cooperation and social-emotional quality predicting early reading achievement. *Reading Research Quarterly*, 33(3), 294–318. <https://doi.org/10.1598/RRQ.33.3.3>
- Levinson, M. P. (2007). Literacy in English Gypsy communities: Cultural capital manifested as negative assets. *American Educational Research Journal*, 44(1), 5–39. <https://doi.org/10.3102/0002831206298174>
- Little, R. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American Statistical Association*, 83, 1198–1202. <https://doi.org/10.1080/01621459.1988.10478722>
- Liu, C., Georgiou, G. K., & Manolitsis, G. (2018). Modeling the relationships of parents’ expectations, family’s SES, and home literacy environment with emergent literacy skills and word reading in Chinese. *Early Childhood Research Quarterly*, 43, 1–10. <https://doi.org/10.1016/j.ecresq.2017.11.001>
- Lonsdale, C., Hodge, K., & Rose, E. A. (2006). Pixels vs. Paper: Comparing online and traditional survey methods in sport psychology. *Journal of Sport and Exercise Psychology*, 28(1), 100–108. <https://doi.org/10.1123/jsep.28.1.100>
- Lopes, D. S., & Costa, A. R. (2016). Os ciganos de Lisboa e a escolarização: Evoluções, impasses, dilemas (2003–2015) [The Lisbon Gypsies and schooling: Developments, impasses, dilemmas (2003–2015)]. *Configurações*, 18(1), 67–86. <https://doi.org/10.4000/configuracoes.3652>
- López-Escribano, C., & Béltran, J. A. (2009). Early predictors of reading in three groups of native Spanish speakers: Spaniards, Gypsies, and Latin Americans. *The Spanish Journal of Psychology*, 12(1), 84–95. <https://doi.org/10.1017/S1138741600001505>
- Magano, O., & Mendes, M. M. (2016). Constrangimentos e oportunidades para a continuidade e sucesso das pessoas Ciganas [Key factors for continuity and educational success of *ciganos* in Portugal]. *Configurações*, 18(1), 8–26. <https://doi.org/10.4000/configuracoes.3546>
- Martini, F., & Sénéchal, M. (2012). Learning literacy skills at home: Parent teaching, expectations, and child interest. *Canadian Journal of Behavioural Science/revue Canadienne Des Sciences Du Comportement*, 44(3), 210–221. <https://doi.org/10.1037/a0026758>
- Mata, L. (2006). *Literacia familiar – ambiente e descoberta da linguagem escrita*. Porto: Porto Editora.
- Mata, L., & Pacheco, P. (2009). Caracterização das práticas de literacia familiar [Characterization of family literacy practices]. In B. Silva, L. Almeida, A. Lozano, & M. Uzquiano (Eds.). *Actas do X*

- Congresso Galaico-Português de Psicopedagogia* (pp. 1741–1753). Centro de Investigação em Educação – CIEd, Universidade do Minho, Braga.
- Mata, L., & Pedro, I. (2021). Participação e envolvimento das famílias - construção de parcerias em contextos de educação de infância. [Participation and involvement of families – creation of partnerships in childhood education contexts]. Ministério da Educação: Direção-Geral da Educação (DGE). Retrieved from: <https://www.dge.mec.pt/noticias/brochura-participacao-e-envolvimento-das-familias-construcao-de-parcerias-em-contextos-de>.
- McKean, C., Mensah, F. K., Eadie, P., Bavin, E. L., Bretherton, L., Cini, E., & Reilly, S. (2015). Levers for language growth: Characteristics and predictors of language trajectories between 4 and 7 years. *PLoS ONE*, *10*(8), e0134251. <https://doi.org/10.1371/journal.pone.0134251>
- Melhuish, E., Phan, M., Sylva, K., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2008). Effects of the home learning environment and preschool center experience upon literacy and numeracy development in early primary school. *Journal of Social Issues*, *64*(1), 95–114. <https://doi.org/10.1111/j.1540-4560.2008.00550.x>
- Mendes, M., Magano, O., & Candeias, P. (2014). *Estudo Nacional sobre as Comunidades Ciganas* [National study about Roma communities]. Lisbon: Alto Comissariado para as Migrações. Retrieved from <https://www.acm.gov.pt/documents/10181/52642/estudonacionalComunidades.pdf/f4aa9b13-797d-40bb-a3b3-1c4011b05760>.
- Mendes, M., & Magano, O. (2021). Educational situation of Portuguese Ciganos social changes versus social continuities. In M. M. Mendes, O. Magano, & S. Toma (Eds.), *Social and economic vulnerability of Roma people. Key factors for the success and continuity of schooling levels*. Springer.
- Mendes, M. M. (2012). Representations about discrimination practices in the education system built by gypsies (ciganos) in the Lisbon Metropolitan Area (Portugal). *SAGE Open*, *2*(1), 1–10. <https://doi.org/10.1177/2158244012441005>
- Mendes, M. M., & Magano, O. (2016). School pathways and economic practices of Portuguese Ciganos: Some continuities and changes. *Social Identities*, *22*(6), 561–576. <https://doi.org/10.1080/13504630.2016.1186537>
- Mendes, M. M., Magano, O., & Costa, A. R. (2020). Ciganos Portugueses: Escola e mudança social [Portuguese Gypsies: School and social change]. *Sociologia, Problemas e Práticas*, *92*, 109–126. <https://doi.org/10.7458/SPP20209313546>
- Mol, S. E., Bus, A. G., & de Jong, M. T. (2009). Interactive book reading in early education: A tool to stimulate print knowledge as well as oral language. *Review of Educational Research*, *79*(2), 979–1007. <https://doi.org/10.3102/0034654309332561>
- Mol, S. E., Bus, A. G., de Jong, M. T., & Smeets, D. J. (2008). Added value of dialogic parent–child book readings: A meta-analysis. *Early Education and Development*, *19*(1), 7–26. <https://doi.org/10.1080/10409280701838603>
- Mullis, I. V. S., Martin, M. O., Foy, P., & Hooper, M. (2017). *PIRLS 2016 International Results in Reading*. Retrieved from <http://timssandpirls.bc.edu/pirls2016/international-results/>.
- Murray, E., McFarland-Piazza, L., & Harrison, L. J. (2015). Changing patterns of parent–teacher communication and parent involvement from preschool to school. *Early Child Development and Care*, *185*(7), 1031–1052. <https://doi.org/10.1080/03004430.2014.975223>
- Nabuco, M. E., Aguiar, M. S., Costa, C., & Morais, D. (2014). Evaluation of the effectiveness of the implementation of the A PAR parental intervention programme in Portugal. Child development and parenting support. *European Early Childhood Education Research Journal*, *22*(4), 554–572. <https://doi.org/10.1080/1350293X.2014.947836>
- Neyer, S. L., Szumlansky, G. A., & Vaughn, L. M. (2018). Beyond the numbers: Social and emotional benefits of participation in the Imagination Library home-based literacy programme. *Journal of Early Childhood Literacy*. <https://doi.org/10.1177/1468798418810765>
- Nicolau, L. F. (2016). Complexidades no percurso escolar das crianças ciganas: Relatos de pais e professores [Complexities in the education path of Roma children: Reports from parents and teachers]. *Configurações*, *18*(1), 105–121. <https://doi.org/10.4000/configuracoes.3682>
- Noble, C., Sala, G., Peter, M., Lingwood, J., Rowland, C., Gobet, F., & Pine, J. (2019). The impact of shared book reading on children’s language skills: A meta-analysis. *Educational Research Review*. <https://doi.org/10.1016/j.edurev.2019.100290>
- Pacheco, P., & Mata, L. (2013). Literacia familiar: Crenças de pais de crianças em idade pré-escolar e características das práticas de literacia na família [Family literacy: Beliefs of parents

- of preschool-aged children and characteristics of literacy practices in the family]. *Análise Psicológica*, 31(3), 217–234. <https://doi.org/10.14417/S0870-8231201300030001>
- Pahl, K., & Kelly, S. (2005). Family literacy as a third space between home and school: Some case studies of practice. *Literacy*, 39(2), 91–96. <https://doi.org/10.1111/j.1741-4350.2005.00406.x>
- Peixoto, C., Leal, T., & Cadima, J. (2008). Comportamentos interactivos de leitura conjunta adulto-criança [Interactive behaviours of adult-child shared reading]. *Actas da XIII Conferência Internacional de Avaliação Psicológica: Formas e Contextos*. Braga: Universidade do Minho.
- Peixoto, C., Cadima, J., & Leal, T. (2011). Sistema de observação de leitura conjunta adulto-criança: Qualidade socioemocional e instrucional dos comportamentos interactivos maternos [Observation system of adult-child shared reading: Socioemotional and instructional quality of maternal interactive behaviours]. *Proceedings of the VIII Congresso Iberoamericano de Avaliação/evaluación Psicológica and XV Conferência Internacional Avaliação Psicológica: Formas e Contextos*. Lisboa: Universidade de Lisboa.
- Pomerantz, E. M., Moorman, E. A., & Litwack, S. D. (2007). The how, whom, and why of parents' involvement in children's academic lives: More is not always better. *Review of Educational Research*, 77(3), 373–410. <https://doi.org/10.3102/003465430305567>
- Pordata. (2017b). Beneficiários do Rendimento Mínimo Garantido e Rendimento Social de Inserção da Segurança Social no total da população residente com 15 e mais anos (%) – Municípios [Beneficiaries of the *Rendimento Mínimo Garantido* and *Rendimento Social de Inserção da Segurança Social* in total resident population of 15 years-old or above (%) - Municipalities]. Assessed on October 18th 2017 at [https://www.pordata.pt/Municipios/Benefici%c3%a1rios+do+Rendimento+M%c3%adnimo+Garantido+e+Rendimento+Social+de+Inser%c3%a7%c3%a3o+da+Seguran%c3%a7a+Social+no+total+da+popula%c3%a7%c3%a3o+residente+com+15+e+mais+anos+\(percentagem\)-715](https://www.pordata.pt/Municipios/Benefici%c3%a1rios+do+Rendimento+M%c3%adnimo+Garantido+e+Rendimento+Social+de+Inser%c3%a7%c3%a3o+da+Seguran%c3%a7a+Social+no+total+da+popula%c3%a7%c3%a3o+residente+com+15+e+mais+anos+(percentagem)-715).
- Pordata. (2017a). Taxa de desemprego segundo os Censos: total e por sexo (%) – Municípios [Unemployment rate according to the Census: total and by sex (%) - Municipalities]. Assessed on October 18th 2017 at [https://www.pordata.pt/Municipios/Taxa+de+desemprego+segundo+os+Censos+total+e+por+sexo+\(percentagem\)-405](https://www.pordata.pt/Municipios/Taxa+de+desemprego+segundo+os+Censos+total+e+por+sexo+(percentagem)-405).
- Raikes, H., Pan, B. A., Luze, G., Tamis-LeMonda, C. S., Brooks-Gunn, J., Constantine, J., Tarullo, L. B., Raikes, H. A., & Rodriguez, E. T. (2006). Mother-child bookreading in low-income families: Correlates and outcomes during the first three years of life. *Child Development*, 77(4), 924–953. <https://doi.org/10.1111/j.1467-8624.2006.00911.x>
- Resende, A., & Figueiredo, M. H. (2018). Práticas de literacia familiar: Uma estratégia de educação para a saúde para o desenvolvimento integral da criança [Family literacy practices: An educational strategy for health for the integral development of the child]. *Portuguese Journal of Public Health*, 36(2), 102–113. <https://doi.org/10.1159/000492265>
- Resolução do Conselho de Ministros n.º 25/2013. Aprova a Estratégia Nacional para a Integração das Comunidades Ciganas (2013–2020). Diário da República n.º 75/2013, Série I de 2013-04-17, 2211–2239.
- Roma Education Fund. (2019). *2018 Annual Report*. Retrieved from <https://www.romaeducationfund.org/3722/>.
- Rosário, P., Núñez, J. C., Azevedo, R., Cunha, J., Pereira, A., & Mourão, R. (2014). Understanding gypsy children's conceptions of learning: A phenomenographic study. *School Psychology International*, 35(2), 152–166. <https://doi.org/10.1177/0143034312469304>
- Rose, E., Lehl, S., Ebert, S., & Weinert, S. (2018). Long-term relations between children's language, the home literacy environment, and socioemotional development from ages 3 to 8. *Early Education and Development*, 29(3), 342–356. <https://doi.org/10.1080/10409289.2017.1409096>
- Salvador, L., & Martins, M. A. (2017). Práticas de literacia familiar, competências linguísticas e desempenho em leitura no primeiro ano de escolaridade [Family literacy practices linguistic, competences and performance in reading in the first year of schooling]. *Análise Psicológica*, 34(1), 1–12. <https://doi.org/10.14417/ap.1172>
- Santiago, R. T., Garbacz, S. A., Beattie, T., & Moore, C. L. (2016). Parent-teacher relationships in elementary school: An examination of parent-teacher trust. *Psychology in the Schools*, 53(10), 1003–1017. <https://doi.org/10.1002/pits.21971>
- Santos, C. J., & Moreira, L. J. A. (2017). Aprofundamento do estudo sobre as comunidades ciganas, pelo observatório das comunidades ciganas. [In-depth of the study on Roma communities, by the observatory of the Roma communities]. *Diálogo Inter-Religioso Alto Comissariado Para as Migrações (ACM)*, 5, 35–42.

- Sawyer, B. E., Cycyk, L. M., Sandilos, L. E., & Hammer, C. S. (2018). 'So many books they don't even all fit on the bookshelf': An examination of low-income mothers' home literacy practices, beliefs and influencing factors. *Journal of Early Childhood Literacy*, 18(3), 338–372. <https://doi.org/10.1177/1468798416667542>
- Scarborough, H. S., & Dobrich, W. (1994). On the efficacy of reading to preschoolers. *Developmental Review*, 14(3), 245–302. <https://doi.org/10.1006/drev.1994.1010>
- Schiefele, U., Schaffner, E., Möller, J., & Wigfield, A. (2012). Dimensions of reading motivation and their relation to reading behavior and competence. *Reading Research Quarterly*, 47(4), 427–463. <https://doi.org/10.1002/RRQ.030>
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modelling and confirmatory factor analysis results: A review. *The Journal of Educational Research*, 99(6), 323–338. <https://doi.org/10.3200/JOER.99.6.323-338>
- Sénéchal, M., & LeFevre, J. A. (2002). Parental involvement in the development of children's reading skill: A five-year longitudinal study. *Child Development*, 73(2), 445–460. <https://doi.org/10.1111/1467-8624.00417>
- Sénéchal, M., & LeFevre, J. A. (2014). Continuity and change in the home literacy environment as predictors of growth in vocabulary and reading. *Child Development*, 85(4), 1552–1568. <https://doi.org/10.1111/cdev.12222>
- Shahaeian, A., Wang, C., Tucker-Drob, E., Geiger, V., Bus, A. G., & Harrison, L. J. (2018). Early shared reading, socioeconomic status, and children's cognitive and school competencies: Six years of longitudinal evidence. *Scientific Studies of Reading*, 22(6), 485–502. <https://doi.org/10.1080/10888438.2018.1482901>
- Silinskas, G., Lerkkanen, M. K., Tolvanen, A., Niemi, P., Poikkeus, A. M., & Nurmi, J. E. (2012). The frequency of parents' reading-related activities at home and children's reading skills during kindergarten and Grade 1. *Journal of Applied Developmental Psychology*, 33, 302–310. <https://doi.org/10.1016/j.appdev.2012.07.004>
- Sonnenschein, S., & Munsterman, K. (2002). The influence of home-based reading interactions on 5-year-olds' reading motivations and early literacy development. *Early Childhood Research Quarterly*, 17, 318–337. [https://doi.org/10.1016/S0885-2006\(02\)00167-9](https://doi.org/10.1016/S0885-2006(02)00167-9)
- Trivette, C. M., Dunst, C. J., & Gorman, E. (2010). Effects of parent-mediated joint book reading on the early language development of toddlers and preschoolers. *Cellreviews*, 3(2), 1–15.
- Ullman, J. B. (2001). Structural equation modelling. In B. G. Tabachnick & L. S. Fidell (Eds.), *Using multivariate statistics* (4th ed., pp. 653–771). Allyn & Bacon.
- Vélez-Agosto, N. M., Soto-Crespo, J. G., Vizcarrondo-Opppenheimer, M., Vega-Molina, S., & García Coll, C. (2017). Bronfenbrenner's bioecological theory revision: Moving culture from the macro into the micro. *Perspectives on Psychological Science*, 12(5), 900–910. <https://doi.org/10.1177/1745691617704397>
- Wang, Y., Deng, C., & Yang, X. (2016). Family economic status and parental involvement: Influences of parental expectation and perceived barriers. *School Psychology International*, 37(5), 536–553. <https://doi.org/10.1177/0143034316667646>
- Wasik, B. A., Hindman, A. H., & Snell, E. K. (2016). Book reading and vocabulary development: A systematic review. *Early Childhood Research Quarterly*, 37, 39–57. <https://doi.org/10.1016/j.ecresq.2016.04.003>
- Weigel, D. J., Martin, S. S., & Bennett, K. K. (2006). Mothers' literacy beliefs: Connections with the home literacy environment and pre-school children's literacy development. *Journal of Early Childhood Literacy*, 6(2), 191–211. <https://doi.org/10.1177/1468798406066444>
- Widaman, K. F. (2006). III. Missing data What to do with or without them. *Monographs of the Society for Research in Child Development*, 71(3), 42–64. <https://doi.org/10.1111/j.1540-5834.2006.00404.x>
- Yamamoto, Y., & Holloway, S. D. (2010). Parental expectations and children's academic performance in sociocultural context. *Educational Psychology Review*, 22(3), 189–214. <https://doi.org/10.1007/s10648-010-9121-z>
- Yarosz, D. J., & Barnett, W. S. (2001). Who reads to young children? Identifying predictors of family reading activities. *Reading Psychology*, 22(1), 67–81. <https://doi.org/10.1080/02702710121153>

Inês A. Ferreira is a PhD student in psychology at Department of Education, Psychology and Philosophy, University of Cagliari, and former research assistant in psychology at CIS-IUL, Instituto Universitário de Lisboa (ISCTE-IUL), and in environmental psychology at Department of Architecture and the Built Environment, Lund University. With background in systemic clinic psychology, her research interests include human perception and affect in urban environments, with a focus on (low-SES) neighbourhoods, and children and family studies.

Carla S. Silva PhD, is a researcher in psychology in Faculty of Psychology, University of Lisbon. Her research focuses on associations between adverse family experiences (e.g., child maltreatment, interparental conflict) and children's and adolescent's developmental outcomes, with a focus on the self-system and its implications for psychosocial functioning.

Leonor Neves is a PhD student in psychology at CIS-IUL, Instituto Universitário de Lisboa (ISCTE-IUL), and former research assistant in the same University. Her PhD project aims to investigate how does musical training affect socio-emotional abilities in children, both at the behavioral and the brain level (MRI).

Sofia Guichard is a PhD student in psychology at the Center for Psychology at University of Porto, and former research assistant at CIS-IUL, Instituto Universitário de Lisboa (ISCTE-IUL). With background in developmental and educational psychology, her research interests focus on inequalities in education, inclusive curriculum and pedagogy, education for social justice and intercultural education.

Cecília Aguiar is an assistant professor at ISCTE-IUL and a senior researcher at CIS-IUL, Instituto Universitário de Lisboa (ISCTE-IUL). With background in developmental and educational psychology, her research focuses mostly on quality and inclusion in early childhood education.

Authors and Affiliations

Inês A. Ferreira^{1,3}  · **Carla S. Silva**^{1,2}  · **Leonor Neves**¹  · **Sofia Guichard**^{1,4}  · **Cecília Aguiar**¹ 

Carla S. Silva
carlasilva@psicologia.ulisboa.pt

Leonor Neves
teresa.leonor.neves@iscte-iul.pt

Sofia Guichard
anaguichard@fpce.up.pt

Cecília Aguiar
cecilia.rosario.aguiar@iscte-iul.pt

- ¹ Centro de Investigação e Intervenção Social (CIS-IUL), Instituto Universitário de Lisboa (ISCTE-IUL), Avenida das Forças Armadas, 1649-026 Lisboa, Portugal
- ² Centro de Investigação em Ciência Psicológica, Faculdade de Psicologia, Universidade de Lisboa, Alameda da Universidade, 1649-013 Lisboa, Portugal
- ³ Present Address: Dipartimento di Pedagogia, Psicologia e Filosofia, Università Degli Studi di Cagliari, Via Is Mirrionis, 1, 09127 Cagliari, Italia
- ⁴ Present Address: Centro de Psicologia da Universidade do Porto (CPUP), Faculdade de Psicologia e de Ciências da Educação da Universidade do Porto (FPCEUP), Rua Alfredo Allen, 4200-135, Porto, Portugal