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Preschool-aged children's agency in shared book reading: the relation to the literacy environment in Czech families

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ABSTRACT

This study explores children's agency in shared book reading sessions with parents and its relation to family literacy characteristics, parents' literacy practices with children and children's print knowledge. Research participants were 142 Czech children, ages 3-6, and their parents. Parents rated their children's agency and the attributes of the home literacy environment in a questionnaire. The data shows that children in the sample exerted agency in shared book reading situations, some of them extensively. Out of the four components of agency, children's manifestations of volition in shared book reading appeared to be the most extensive, followed by asking questions, imitating reading and monitoring parents when they were reading to them. Overall, the results indicate that literacy-aimed activities, which the parents carry out with their children, relate to children's agency more than literacy qualities of the home, like the number of children's books, children's exposure to literacy, or parental education.

KEYWORDS: Children's agency; family literacy characteristics; parents' literacy practices; print knowledge; reading to children

Introduction

This study concentrates on preschool-age children's agency during shared reading with their parents. Though at this age children are generally not yet able to read independently and are reliant on reading provided by parents, they can manifest literacy-related activities that concern the reading content, reading process and print conventions (Bracken & Fischel, 2008; Burgess, Hetch, & Lonigan, 2002; Evans, Shaw, & Bell, 2000; Puglisi, Hulme, Hamilton, & Snowling, 2017). While the theoretical literature recognizes children as social actors who are able to incorporate volition and intention into their interaction with the world (Bjerke, 2011; Kuczynski, 2003; Kumpulainen, Lipponen, Hilppo, & Mikkola, 2013), there is little knowledge describing how children exert agency while acquiring literacy. Though the extent of children's agency may not be extensive, its occurrence may show that the child is an actor in shared book reading with parents rather than a passive recipient of parents' reading production.

This study investigates the parental role in the manifestation of children's agency in shared book reading with their parents. Parents may promote a sense of agency in children by providing opportunities for them to make choices and decisions and by delegating to them powers to influence events. Agency is developed in joint activities and social interactions with family members. Parents, who are aware of the agentic potentials of a child, create environments for their children to negotiate ideas and make decisions in setting their own goals and exerting their interests. Parents may actively

engage children in shared book reading, involve them in verbal exchanges about the story, elicit from them verbal responses to the story, and expand the children's responses (Hindman & Morrison, 2012; Huebner & Meltzoff, 2005; Justice & Pullen, 2003; Rodriguez, Hines, & Montiel, 2009).

Assuming the importance of the parent's role in the promotion of children's agency, this study focuses on determining the association of children's agency with a number of home literacy environment variables. Specifically, it examines family literacy characteristics, such as the number of children's books and the reasons parents read to children. Further, the study explores parents' literacy practices, such as facilitation of storybook comprehension or playing letter games with children. Because a child's agency might develop in connection with other literacy variables, this study examines it in relation to their early literacy knowledge, represented by the child's understanding of print and print concepts.

Children's agency

The conceptual framework of this study is children's agency. This concept draws on ideas about linkages between children and social processes within the framework of the New Sociology of Childhood. Agentic theory considers children as social actors who are active in the construction of their social lives. They are able to initiate intentional actions in order to achieve goals that they value. Having a sense of agency is closely linked to the concepts of being, belonging and becoming, and to developing a strong sense of identity (James & Prout, 1997; James, Jenks, & Prout, 1998; Jenks, 1996; Mayall, 2002). Agency is described in terms of pursuing children's intentional choices, initiatives, active participation and senses of autonomy (Bjerke, 2011; Kuczynski, 2003; Kumpulainen et al., 2013). Children are able to incorporate volition and intention in their conduct and are able to reflect upon their ability of being initiators or executors of actions in a given situation (De Vignemont & Fournieret, 2004).

Agency is the manifestation of social competence (Hutchby & Moran-Ellis, 2005). Moran-Ellis (2013) argues that being a social actor is not the sole condition for possessing the capacity of agency. Agency is not a synonym for acting, and not all acting is the exhibition of agency. 'Social competence allows for the possibility that a child may be a social actor who is designing their actions to achieve particular purposes, they may nonetheless not succeed in attaining the effects they desire - i.e. they may or may not be agentic. Agency then is an accomplishment through interaction, not a property possessed by the individual' (Moran-Ellis, 2013, p. 312). The execution of agency, as a competence, depends on the setting and circumstances in which the children are present. If favourable, they can use all of their agentic capacities. In other words, agentic capacity is 'the product of the interplay between individual desires and the exercise of power and authority by other actors, or institutional actors' (Moran-Ellis, 2013, p. 311). These are parents, other adults, or the preschool.

The degree of exertion of agentic capacity varies not only by the setting but also by the child's age. Across age groups, it may have different ways of manifestation, levels and intensity. Children as young as toddlers express some basic choices, pursue their desires, and follow their drives. For instance, they are capable of resisting when they perceive threats to their autonomy (Deci & Ryan, 2000; Kuczynski, 2003). In the study of Katsiada, Roufidou, Wainwright, and Angeli (2018), children under three years of age in a day-care setting exerted their agentic potentials in choosing a person to deal with throughout the day. They exercised agency to form emotional relationships with available adults, regardless of the adult's role and status in the setting (educators, ancillary staff). They exercised capacity to initiate and accept or reject warmth, in sensitive, affectionate and playful interactions with adults, either physical or verbal. Danby and Baker (1998) demonstrated how children in a preschool could deploy their knowledge of institutional rules to create spaces of autonomy and resistance. In a

conflict resolution situation, they employed one strategy in the teacher's presence and another one when they were alone. Markstrom and Halldén (2009) showed how children acted strategically in a preschool institution. They collaborated with others, or they resisted by using avoidance and silence, or they negotiated activities with an adult. One childhood strategy was to collaborate to gain access to time and space. Furthermore, the children in the study often helped each other to get what they wanted. Houen, Danby, Farrell, and Thorpe (2016) show how a teacher's educational strategies differ in affecting children's agency within the bounds of classroom life. While investigating the use of 'I wonder...' formulations, teachers determined a spectrum of affordance of agency in the preschool classroom. The 'I wonder...' strategy was contrasted with 'Could you ...' and 'Do it.' The former formulation offered a child a genuine choice, while the latter formulations limited or disabled agentic conduct on the part of the child. The authors argue that children's agency is co-constructed through the unfolding sequences of talk, with contributions from both adults and children (Houen et al., 2016). This point is also supported by Mashford-Scott and Church (2011) in their investigation of teacher-child interactions, which enabled opportunities for children's active participation in the learning environment.

Home literacy environment

Broadly defined, the home literacy environment (HLE) includes family factors associated with reading to children and its results. Studies have documented that a literacy-rich home environment and parent encouragement contribute to their children's successful acquisition of emergent literacy skills and attitudes (Burgess et al., 2002; De Jong & Leseman, 2001; Duursma, 2014; Puglisi et al., 2017; Sénéchal & Le Fevre, 2002; Van Kleeck, Gillam, Hamilton, & McGrath, 1997). HLE includes resources and opportunities provided to a child in order to experience and learn literacy in the home. The most common resources are children's books, which serve both as an object of a parent's reading to a child and for a child's independent viewing and exploring. In a literacy-rich environment, many books of different genres (fairy tales, stories, poems, picture dictionaries, cartoons, etc.) are available for a child to acquire literacy experiences (Burgess, 2011; Grieshaber, Schield, Luke, & Macdonald, 2012; Weigel, Martin, & Bennett, 2006). Apart from providing books to a child, a parent's own literacy behaviour contributes to creating a stimulating literacy environment. Parents may serve as book-reading role models if they read frequently, visit libraries, buy books and discuss them with the family (Zickuhr et al., 2013).

Most parents are not attitudinally neutral to the literacy development of their children. They hold beliefs and values that they manifest in encouraging and appreciating literacy when they read to their children (De Baryshe, Binder, & Buell, 2000; Dobbs-Oates, Pentimonti, Justice, & Kaderavek, 2015; Lynch, Anderson, Anderson, & Shapiro, 2006; Sonnenschein et al., 1997). Research provides evidence that parents' attitudes and beliefs relate to types of activities in which parents engage with their children in shared book reading situations. Parents interact with their children in a way consistent with their beliefs and repeatedly share their values with their children (Lynch et al., 2006; Weigel et al., 2006). Research has found that parents' favourable beliefs in the reading and literacy development of their children are related to the better early literacy skills of their children, though other variables, among them the mother's education, may play a role (Curenton & Justice, 2008). Evidence also suggests that parents' beliefs affect children's interest in reading and valuing books. Mothers who believe that reading is enjoyable read more frequently to their children and interact more with them during shared reading. The children of mothers holding these beliefs show greater interest in reading (De Baryshe, 1995). Parent's beliefs affect reasons parents read to children. Three basic reasons have been identified. The cognitive reason covers motives such as the development of children's thinking,

expansion of knowledge of the world through stories, and enlargement of vocabulary. The emotional reason is sharing a happy time while reading to a child. The appeasement reason is reading to children in order to calm them and get them to sleep at the end of a busy day (Gavora, 2016).

One of the crucial factors that determines a family's literacy resources and practices is parental education. Parents with higher education usually hold better-paid jobs and thus may afford rich literacy resources for themselves and for their children. Parents of higher socio-economic status often provide a more stimulating home literacy environment and thus offer a broader range of activities or more frequent activities to their children (Burgess et al., 2002; Niklas & Schneider, 2013; Van Steensel, 2006). Education is positively related to the parent's level of language and literacy. Homes of more literate parents provide richer opportunities for the literacy development of their children than those with low levels of language and literacy (Phillips & Lonigan, 2005).

An important component of HLE is parents' activities aimed at supporting the early literacy development of their children. These are, for instance, reading to children, discussing the story topic and characters, directing the children's attention to the printed word, explaining the formal components of a text, and explicitly teaching them letters and words (Hindman & Morrison, 2012; Justice, Kader-avek, Fan, Sofka, & Hunt, 2009; Rodriguez et al., 2009; Sénéchal & Le Fevre, 2002; Silinskas et al., 2012; Tamášová & Šulganová, 2016). A range of studies has tried to explain the benefits of literacy practices through a number of children's literacy outcomes. Generally, the findings indicate that participation in literacy-related activities in the home is a predictor of children's early literacy skills (Burgess et al., 2002). One of the most investigated variables within these practices is the frequency of reading to a child. A decisive positive effect on children's early literacy development is achieved if parents read to their children habitually and frequently (Deckner, Adamson, & Bakeman, 2006; Meng, 2016; Silinskas et al., 2012). Deckner et al. (2006) showed that reading frequency and parental reading-related activities contribute significantly to a child's language development, at both the receptive and the productive levels, and that the skills acquired persist beyond many months. The authors examined whether mothers draw attention to the linguistic side of reading, whether they ask questions, explain the meaning of words, use already mastered words, or point out the typographic elements of the book. Such activities have a major impact on the development of a child's language. A representative U.S. survey (Yarosz & Barnett, 2001) documented that the frequency of reading reported by parents was predicted by maternal education (in addition to ethnicity, the language spoken in the home, and the number of siblings). While there is an abundance of studies based on frequency counts of parents' activities with children, it should be equally emphasised that quality, not just quantity, is a relevant factor that contributes to children's literacy learning (Bojczyk, Davis, & Rana, 2016). Quality rather than frequency of parent-child interactions contributes to the child's literacy development more if it compensates for some unfavourable HLE characteristics (Bergin, 2001).

Another important factor is the child's age at which parents begin to read to the child (Boudreau, 2015). Early reading generally brings better results in the development of early literacy than late reading, although other factors also play a role. When a parent reads with the child from an early age, the language and content input takes a longer time, so its influence may be greater. Some parents start reading to their children quite early; there are even mothers who read to the baby before birth. According to the research of Niklas, Cohrssen, Tayler, and Schneider (2016a), approximately 75% of German parents start reading to their children before their second birthday. Similar data has been found in Australia (Niklas, Cohrssen, & Tayler, 2016b) or in predominantly Caucasian American families (Deckner et al., 2006).

Shared book reading

Many literacy practices, generally in the preschool age, are commonly referred to as shared book reading. This term emphasizes that reading to a child is rarely a one-way process; usually a parent and a child interact during the reading session. A parent may direct the child's attention to illustrations, print, or word meanings, check understanding, provide explanations and draw connections between events in the text and those in the child's own life (Haney & Hill, 2004; Hood, Conlon, & Andrews, 2008; Justice & Ezell, 2002; Sénéchal & Le Fevre, 2002; Van Kleeck et al., 1997). While reading, the parent may engage the child in a dialogue about the book's story, characters and setting. The parent also may explain the meaning of words, pictures or typographical conventions of the book (Hindman, Skibbe, & Foster, 2014). A parent-child dialogue may provide the child with access to ideas and the life beyond the story and thus expand their knowledge about the world (Ganea, Pickard, & DeLoache, 2008; Girolametto, Weitzman, van Leishout, & Duff, 2000). The child can learn specific content that the parent presents through books (Evans et al., 2000; Hindman & Morrison, 2012; Hindman, Connor, Jewkes, & Morrison, 2008; 2014). Parents may also explain the meaning of letters and teach children sound awareness, important attributes on the way to attaining the skills of reading and understanding the written text. In sum, shared book reading may contribute to children's early literacy, language development, book value orientation and motivation to read. When parents and children read together, not only are the language and cognitive development supported, but also the emotional development of the child (Justice & Pullen, 2003).

Though many studies have analysed parent-child interactions during shared book reading, far fewer have emphasised children's agentic behaviour. Levy, Gong, Hessels, Evans, and Jared (2006) studied children's involvement in literacy activities as rated by parents on a five-point scale, from parent initiated to rarely initiated by parents/child pursued on own. The highest rating included activities such as the child printing their name, looking at magazines/books, watching educational TV or practicing letter names/individual words. The authors did not recognize their study as being based on the agency theory, however, the initiative variable they used is a core agentic behaviour. Gavora (2016) interviewed parents about their perceptions of their children's agentic behaviour while they read books to them. These parents described a number of activities that manifested themselves in children's initiative in the book reading dyad, including book selection, commenting on topic or characters, asking questions, expanding the story and negotiating the reading time. The children's agentic behaviours culminated in taking the lead in the reading dyad by monitoring the parents' reading, correcting them, or admonishing them for skipping a line. Other studies in the literacy domain associated agency with children's interest. In the preschool setting, Rowe and Neitzel (2010) investigated how 2- and 3-year-old children manifested their interest in early writing activities. They documented how children adapted these activities to better align with their own interests. Children initiated or changed the activity type, topic, materials, or social roles to harmonize with their desires, which, according to the authors, demonstrated exertion of children's agency.

The Czech family context

This study was organized in the Czech literacy environment. Unlike English or French, Czech is an orthographically consistent language with high letter-sound correspondence. The type of orthography results in important differences in language acquisition, as was documented in a comparison of Spanish, English, Czech and Slovak children (Caravolas, Lervág, Mousikoui, & Hulme, 2012; 2019). However, the language typology only loosely pertains to the agentic behaviour of children. It is rather the sociocultural tradition of the family that determines the position of children, promoting or

hindering their opportunities and initiative, enabling or disabling them from making choices and decisions that influence events and their world. Traditional Czech families manifest high attachment to children and emphasize group integration around the family, though the current trends confirm diversion from these family strategies (Kuchařová et al., 2019). The favourable family climate opens opportunities for the children's employment of agency.

Initiatives to promote children's early literacy in Czech families are organized by independent associations rather than by governmental institutions. They are based on the notion that reading to children plays an important role in developing a positive reading attitude and a love for reading. They demonstrate to parents that reading is valuable and desirable. The leading nationwide initiative is called 'Every Czech Reads to Kids'. It organizes campaigns to support reading at home and informs parents about the benefits of such reading. The leading idea is that reading aloud to children promotes their emotional development as well as forms reading habits, which continue into their adult lives. One of the reasons for this initiative is that the time spent by parents with children has recently decreased due to many factors, among them TV viewing and video game playing. This initiative provides parents with recommendations about what age to start reading to the child (as early as possible), how frequently a reading session should take place (preferably every day), how long it should be (20 min at minimum), and how to interact with children in shared book reading (e.g. asking questions about the story). The initiative also invites writers and actors to read publicly from children's books. Associated with this initiative are actions, e.g. 'A Night with Andersen'. a library event in support of children's reading during which children spend a night in the library on the occasion of the birth anniversary of the Danish fairy tale writer Hans Christian Andersen. 'Grandmother and Grandfather Read to Kids' connects two generations in reading and strengthens the intergenerational sharing of time, space and transmission of values. 'Reading to Kids in Hospitals' is an initiative to bring reading to children as a means of coping with their stay in a hospital for an extending period of time. All these initiatives are governed by the idea that reading to children promotes enjoyment of reading and the development of early literacy, long before they start school.

Research

The research literature documents that children who live under favourable family circumstances are active and engaged in home literacy processes (Bojczyk et al., 2016; Leech & Rowe, 2014). However, little knowledge has been accumulated on the children's engagement in these processes from the specific lens of the agentic theory. Therefore, the primary focus of this study is to address this knowledge gap by documenting in which forms and to what extent the child performs agentic behaviour in shared book reading with parents.

The second purpose of this study is to explore the relationship between the child's agentic behaviour in shared book reading and HLE variables. Research confirms that the variability within HLE is a key factor of differences in the child's literacy outcomes. These differences include the home literacy resources (Grieshaber et al., 2012; Weigel et al., 2006), frequency and duration of literacy-related activities (Deckner et al., 2006; Meng, 2016; Silinskas et al., 2012), and parental beliefs of shared reading benefits for the child's language (De Baryshe et al., 2000; Dobbs-Oates et al., 2015; Lynch et al., 2006). However, little is known about how variability in HLE is related to the child's agentic behaviour in shared book reading. Consequently, this study concentrates on exploring the predictive value of HLE variables on the child's agentic behaviour.

The third purpose of this study is to focus on children's knowledge of print and print conventions. Research has confirmed that this knowledge is an excellent representation of early literacy and is a

strong predictor of later achievement in reading and writing (Levy et al., 2006; Neumann, 2018; Whitehurst & Lonigan, 2002). This study will explore how children's agentic behaviour is associated with their knowledge of print and print conventions.

In summary, the study aims to answer the following questions: What is the extent of children's agency in shared book reading situations with parents? What components of agentic behaviour do children exert in shared book reading situations with parents? What are the differences in children's agency in shared book reading situations with parents in relation to the children's ages?

While these questions focus on the amount of children's agency, the following questions relate this behaviour to family variables: How strong is the relationship of children's agency to HLE variables? Finally, the study explores the relationship to a children's variable: How strong is the relationship of children's agency to their knowledge of print and print conventions?

Methods

Participants

The participants in this study were 142 preschool-age children and their parents, who live in the Zlín Region of the Czech Republic. Children were randomly selected from those attending preschools in the region, upon receiving consent for participation in the study from their parents. The children's ages ranged from 36 to 79 months ($M = 61.8$; $SD = 9.92$). Boys somewhat outnumbered girls, 75 (53%) to 67 (47%). Nearly all of the children (91.4%) resided in two-parent households. All children were raised in the parents' homes and attended preschools in their neighbourhood. The preschools offer full-day programmes that follow the national curriculum emphasising the cognitive, moral, emotional and physical development of children.

The parents' education levels are displayed in Table 1. Compared to the Czech census data (2018), the number of mothers in this sample exceed the female Czech population with university degrees by 30.4%, while 12.6% fewer men in this sample completed upper secondary general school and fewer than 4.1% have university degrees than the average Czech adult male.

Instruments

A quantitative research design was chosen for this study in order to create regression models predicting child agency from parents' and children's literacy-related variables. Two instruments were used: a parent questionnaire and the Concepts about Print test for children.

The parent questionnaire. A parent questionnaire was developed that consists of the following parts:

Child's characteristics. Parents were asked about their child's age, gender and the number of books they possess. Parents were also asked how old their children were when they first read to them. This item was included because the age at the onset of reading to a child indicates the cumulative time the parents devoted to such reading.

Child's agency rating. Parents rated the literacy-related agency of their child on 13 scales that covered four components:

- Volition: children request parent's reading, select a book to be read to them and appeal to the parent to continue the reading session when the story ended (3 items).
- Questioning: children ask questions about pictures and unfamiliar words in the book, comment on the plot or characters, and pose why-questions concerning the story (4 items).
- Literary production: children retell the story based on book images, tell their own stories and imitate reading - they turn pages and narrate the story (3 items).
- Monitoring parent's reading: children turn the pages and finger track during the parent's reading and admonish the parent if some lines of the text were omitted (3 items).

The scale ranged from never (1) to very frequent (5). Items were derived from a previous interview-based study with parents describing the behaviour of their child during shared reading (Gavora, 2016), then they were face validated by two researchers and three parents. The questionnaire items were then checked for comprehensibility and relevance. Based on the feedback, minor amendments were made to the item language. Reliabilities (Cronbach's α) of the agency components were as follows: volition .694, questioning .744, literary production .695, and monitoring parent's reading .697. The total scale reliability was .830. A confirmatory factor analysis was conducted to validate the model of agency rating with four 'latent' factors, i.e. volition, questioning, literary production and monitoring. The indices proved the model to be satisfactory: RMR = .067; AGFI=.929; GFI = .900; TLI = .903 and RMSEA = .067.

Table 1. Parents' level of education.

Education	Mother	Father
Lower secondary	1 (0.7%)	1 (0.7%)
Upper secondary vocational	19 (13.4%)	36 (25.4%)
Upper secondary general	48 (33.8%)	62 (43.7%)
University	69 (50%)	39 (23.2%)
Missing data	3 (1.4%)	2 (1.4%)

Reasons to read to children. These items were included based on literature that suggests that these beliefs play an important role in creating the home literacy environment (e.g. De Baryshe et al., 2000; Dobbs-Oates et al., 2015; Lynch et al., 2006; Sonnenschein et al., 1997). Two reasons were assessed:

- Cognitive reasons to read to children. Example: I read to the child because it improves reasoning. Eight items, a scale from strongly disagree (1) to strongly agree (5), Cronbach's α = .904.
- Emotional reasons to read to children. Example: I read to the child because it is a happy time to share with the child. Three items adopted from the Home Activities Questionnaire (Hammer, Miccio, & Wagstaff, 2003), a scale from never (1) to very often (5), Cronbach's α = .810.

Parents' literacy activities with children. This section measured the frequency and duration of parent's reading to their children. While frequency is a standard measure of reading, duration has not been explored systematically in previous studies, though it has a different impact on a child than frequency. A longer time not only enables longer exposure to reading but also provides more opportunities to interact over the story.

Further, parents were asked to rate two literacy-related activities:

- Facilitation of reading comprehension (6 items): explaining the meaning of words, clarifying situations and actions of characters, linking the story with a child's experience (example How often do you explain a situation in a book when you feel the child does not understand?). The parent answered on a scale from never (1) to very often (5). Reliability of .759 (Cronbach's α).
- Alphabetical activities with the child (4 items) adopted from the Home Activities Questionnaire (Hammer et al., 2003): the parent plays with a child letters- or numbers-games and practices letter/word writing (example How often do you play letters- or numbers-games with your child?). The parent answered on a scale from never (1) to very often (5). Reliability of .730 (Cronbach's α).

The full parent questionnaire is in the Appendix.

Demographic characteristics included the child's gender and the education of the mother and father. The parents were contacted through the preschool that their child attends and filled in the questionnaire in their homes.

Concepts about Print test. The Concepts about Print (CAP) test was developed by Clay (2013) to assess children's knowledge of print and print conventions, a basic component of early literacy. The test measures book orientation familiarity, understanding of the directional arrangement of print on the page, the knowledge that print, not picture, contains the story, understanding of important reading terminology such as word, letter, beginning of a sentence, reading direction on a page and in a book and an understanding of simple punctuation marks. The English version of the CAP test was translated into Czech. It contained 19 items¹ with a Cronbach's α of .784.

The CAP test was adopted for this study because it is theoretically well established to capture early print concepts and book conventions (Doyle, 2013) and it proved satisfactorily reliable. Apart from English, the test was confirmed to function efficiently in other languages as well, like Greek (Tafa, 2009), Turkish (Altun, Tantekin Erden, & Snow, 2018) or Slovak (Zápotočná, 2005).

The test was administered individually to each child. Each administration took about 15 min. The children were tested either in their homes or in preschool, during a free period. Efforts were made to ensure that the children were comfortable during the test administration, which resembled a shared book reading with a parent. The researcher engaged a child in participation by saying, 'I am going to read you a story, but I want you to help me.' (Clay, 2013) The researcher showed the child a children's book (Stone or On the Beach, which are parts of the test), read the story and asked test questions. The answers were scored one point for each correct response. The maximum score is 19.

Ethical considerations

Parents were provided information about their and their child's position and rights in the study. Full consent was obtained from them prior to the study concerning their and their child's involvement. After explaining the test assignments to the children, they were asked about their willingness to participate. No child declined. The anonymity of the participants was ensured by attributing arbitrary names to them.

Results

The results are divided into three parts. In the first part, descriptive statistics are provided about parents' ratings of their children's agency, HLE variables and the children's CAP scores. In the second part, a correlational analysis is made of all the child and family variables. In the third part, a regression analysis is presented with the children's agency as the dependent variable and HLE variables as predictors.

Children's agency

The average parents' rating on their children's agency was 3.14 points. This value is somewhat above the midpoint of the five-point scale used in the study, indicating that, on average, parents view their children's agentic behaviour as moderately frequent. However, the ratings of individual children were diverse, and the range of this variable is large: 3.39 points on a five-point scale. Figure 1 shows the distribution of ratings. The Shapiro-Wilk test indicates that the distribution is normal ($W = .870$, $p = .505$), with skewness -0.118 and kurtosis $.237$. The ratings of girls and boys were highly similar, $M = 3.15$ ($SD = .625$) for girls, $M = 3.13$ ($SD = .645$) for boys, with no significant difference ($t(140) = .159$; $p = .874$).

In this study, agency was a compound consisting of four components: volition to act in a reading situation, asking questions, early literary production, and monitoring their parents during shared book reading.

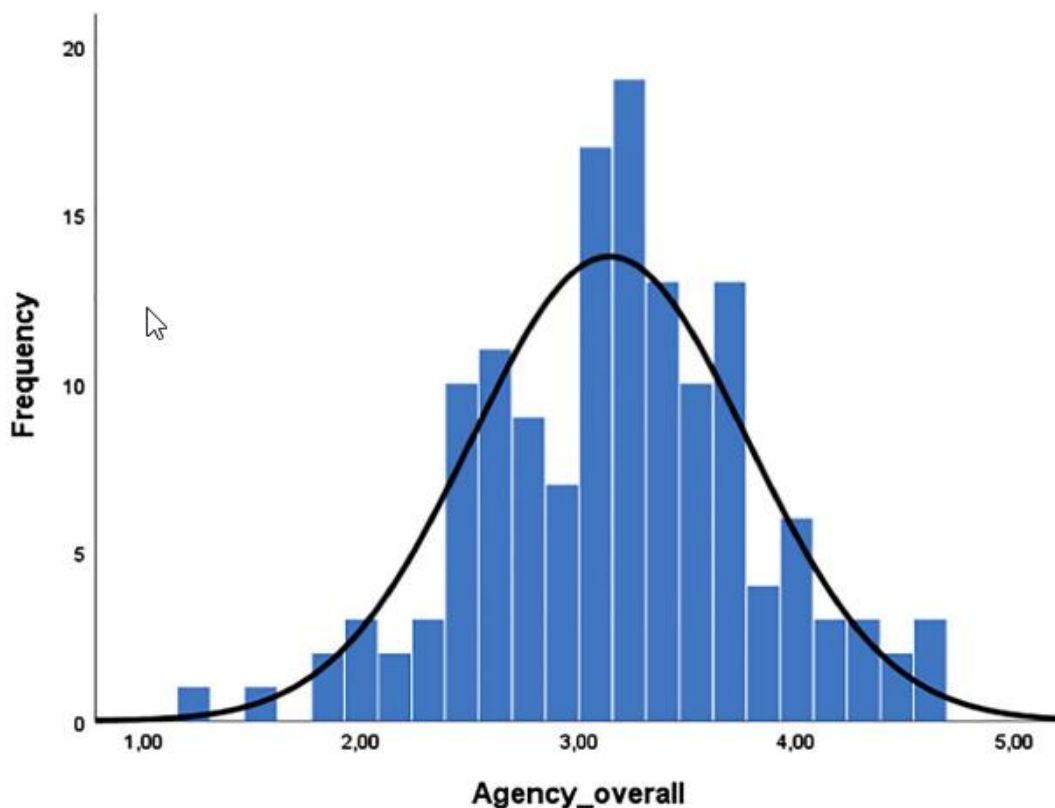


Figure 1. Children's agency ratings by parents

Table 2. Parents' ratings of children's agency by agency components and age.

	age 3 (n = 11)	age 4 (n = 23)	age 5 (n = 62)	age 6 (n = 46)	All (n = 142)
Volition	3.97 (.53)	3.79 (.82)	3.96 (.92)	3.99 (0.71)	3.95 (.81)
Questioning	3.59 (.82)	3.23 (.77)	3.16 (.84)	3.46 (.68)	3.30 (.78)
Production	3.27 (.66)	2.92 (.88)	2.80 (.99)	2.94 (.82)	2.90 (.90)
Monitoring	2.42 (.98)	2.32 (.89)	2.28 (.99)	2.46 (1.04)	2.90 (.98)

Note: Scale 1 (never) to 5 (very frequent)

Table 2 presents ratings on each component by children's age. In each age, the score pattern is similar, and it reflects the difficulty of the activity and the level of the development of the children's literacy-related ability. The highest frequency was rated in the children's volition to act (showing an intention to be read to, making a decision on which book would be read, or requesting the continuation of reading). The second most frequent activity was children's questioning (asking questions linked to the story). The two lowest rated agency components were children's literary production (producing own stories or imitating reading) and monitoring parents' reading (correcting errors, admonishing them for skipping a line). This rating pattern was consistent at all ages. However, the score on some agency components was larger at a lower age than at a higher age (e.g. at age 3 the volition score was 3.97, but at age 4 it was 3.79), which can be attributed to the small sample size. But, the hierarchy of scores through the components was kept constant at each age.

HLE variables

Children in many families in this sample are reported to have more than 30 books (46.5%), while other families have 30 books (19.7%), 20 books (22.5%), or only 10 books (11.3%). Some children saw parents reading by themselves once a day (39.3. %), while others saw them once a week (23.6%). However, as many as ten percent of children never saw parents reading by themselves, or they saw them rarely. Parents were asked to report on their reasons for reading to children. Results indicate a significantly higher rating for reading to promote the cognitive development of the child ($M = 4.40$, $SD = .695$) over reading for emotional reasons ($M = 4.05$, $SD = 1.04$), $t(139) = 4.314$, $p < .001$.

The frequency of reading to a child as reported by parents is a basic variable within their literacy practices. As many as 71.7% of parents read to their child several times a week or daily, 17.7% of parents read once a week, and 10.6% of parents never read to their child or read once a month. Parent were also asked how frequently another adult in the family reads to a child. This frequency was considerably less favourable. As many as 31.7% read several times a week or daily, but 49.2% read never or once a month. In addition to the reading frequency, parents were asked about the duration of a reading session. The majority of parents (54.6%) read to their children for 5-10 min, some parents (39%) read up to 30 min, while some (6.4%) read 40min or more.

Because the age at the onset of reading to a child indicates the cumulative effect of time the parents devoted to this reading, parents were asked how old their children were when they first read to them. The mean age at the onset of reading was 23.4 months ($SD = 12.3$), range 0-48 months. Seven parents reported they read from 0 months, which seems to be a realistic number. Some mothers read to their child from birth, while others read to their sibling(s) while the younger one was present. Parents were asked to rate the frequency at which they facilitate children's comprehension of the story (e.g. explaining the meaning of words) and also to rate their alphabetical activities (e.g. playing letter games with the child). By coincidence, both activities yielded identical means, 3.03 ($SD = .76$ and $.99$,

respectively), a value slightly above the midpoint of the scale from 1 (never) to 5 (very often). Further, it was checked whether a child's gender is a variable that determines the parents' literacy practices with children. Gender differences appeared only in the reading frequency, where parents read more frequently to boys ($\chi^2(4, N = 141) = 11.29, p = .023$).

Table 3. Differences in parents' literacy practices by children's age.

Parents' literacy practices	ANOVA
Reading frequency to child	$F(3,137) = 2.41, p = .749$
Reading freq. other adult to child	$F(3,138) = 0.70, p = .551$
Reading duration to child	$F(3,137) = 0.11, p = .956$
Comprehension facilitation	$F(3,137) = 2.07, p = .107$
Alphabetical activities	$F(3,138) = 1.84, p = .143$

Note: Age categories were 3, 4, 5 and 6 years

It might be assumed that the age of children, rather than gender, was a factor that affected parents' ratings of literacy practices. Parents who have older children might provide longer and more frequent shared book reading sessions, or they might accomplish literacy activities like comprehension facilitation and alphabetical activities more frequently. However, this assumption proved incorrect. None of these literacy practices was affected by children's age (Table 3).

CAP test

In contrast to family HLE variables, which were rated by parents, the CAP test was administered to children. Table 4 displays the descriptive data. The CAP mean score was 9.8 (SD = 3.63), with the minimum 3 and maximum 19 points, skewness = .242, kurtosis = -0.705. There was no significant difference between genders. Post hoc ANOVA with Bonferroni correction indicated that the mean score of three-year-old children (M = 6.6; SD = 1.64) significantly differed from four-year-olds (M = 7.9; SD = 3.46) and from five-year-olds (M = 9.8; SD = 3.40), and that the mean score of four-year-old children significantly differed from the score of six-year-olds (M = 11.4; SD = 3.47).

Correlation analysis

Correlations between the variables among children's agency ratings, HLE variables and the CAP test vary in significance and magnitude (Table 5). children's agency ratings significantly correlate with the cognitive reason to read, reading frequency, reading duration, comprehension facilitation and alphabetical activities. The highest correlations with children's agency ratings are those that actively engage children in literacy processes: comprehension facilitation enables children to understand the story and alphabetical activities, e.g. playing letter games or learning to identify letters, promoting their literacy knowledge and skills. Agency ratings have a significant but negative correlation with children's age at reading onset. Against expectations, the number of children's books, parents' education, and emotional reason to read do not significantly correlate with children's agency. As anticipated, children's agency correlates significantly with the CAP test scores.

The correlation matrix reveals certain patterns among other HLE variables. Cognitive reason to read appeared as a strong variable because it correlates with all variables in the matrix. Emotional reason to read to children significantly correlates with all HLE variables except with alphabetical activities and the agency rating. The number of children's books significantly correlates with all variables in the matrix, except with the agency ratings, reading duration, comprehension facilitation and alphabetical activities. The mother's education significantly correlates with all variables in the matrix with the exception of agency ratings, children's age at reading onset and alphabetical activities. Reading frequency significantly correlates with all variables in the matrix except the alphabetical activities and the CAP test.

Table 4. CAP test results.

	<i>n</i>	<i>M</i>	<i>SD</i>	<i>min</i>	<i>max</i>	<i>F</i>	<i>p</i>
Girls	67	10.0	3.66	4	19	.455	.501
Boys	75	9.6	3.61	3	17		
Overall	142	9.8	3.63	3	19		

Note: CAP = Concepts about Print test

Table 5. Correlations among children's agency ratings, HLE variables and the CAP test.

Variables	1	2	3	4	5	6	7	8	9	10	11
1 Agency	-										
2 No. of books	.07	-									
3 Mother's education	.15	.32***	-								
4 Father's education	.00	.33***	.48***	-							
5 Cognitive reason	.36***	.34***	.24**	.23**	-						
6 Emotional reason	.16	.48***	.17*	.19*	.45***	-					
7 Reading frequency	.26**	.50***	.34***	.35***	.41***	.38***	-				
8 Reading duration	.29***	.14	.24**	.09	.26**	.19*	.26**	-			
9 Age at reading onset	-.027***	-.029***	-.014	-.014	-.034***	-.023**	-.035***	-.022**	-		
10 Comprehension fac.	.66***	.12	.29***	.14	.49***	.31***	.29***	.33***	-.039***	-	
11 Alphabetical activities	.42***	.01	.00	.08	.27**	.14	.14	.00	-.014	.41***	-
12 CAP	.30***	.20*	.22**	.10	.27**	.28***	.08	.29***	-.005	.33***	.26**

Predictors	<i>B</i>	<i>SE b</i>	β	<i>t</i>	<i>p</i>	<i>F</i>	<i>p</i>
Age at reading onset	.003	.044	.005	.064	.949	18.935	<.000
Reading frequency	.043	.045	.070	.942	.348		
Reading duration	.079	.064	.87	1.229	.221		
Cognitive reasons	-.0034	.071	-.0038	-.0479	.633		
Comprehension facilitation	.464	.068	.0571	6.783	.000		
Alphabetical activities	.100	.045	.157	2.209	.029		

Table 6. Regression analysis to predict child agency from HLE variables.

Note: Dependent variable: child's agency

Regression analysis

A regression analysis was conducted to examine the unique contribution of HLE variables to the prediction of children's agency ratings. Six HLE variables, which correlated significantly with children's agency ratings, were entered as predictors: child's age at reading onset, reading frequency, reading duration, cognitive reasons to read to a child, comprehension facilitation and alphabetical activities. Variables used in the regression analysis are reported on Table 6. The regression model explained 45% of the variance in the children's agency. Looking at the results, two measures have significant predictive power. The strongest predictor is comprehension facilitation followed by alphabetic activities. Thus the two HLE characteristics that engage children in active participation in literacy

learning proved the strongest effect on agency rating. Additionally, a regression analysis was performed predicting the CAP scores from the identical predictors and agency ratings. The model explained 17% of the variance with two significant predictors, reading duration and alphabetical activities.

Discussion

While many studies concentrated on children's agency in other domains than reading (Markstrom & Halldén, 2009; Rainio, 2008; Wood, 2014), and in other contexts than family (Gurdal & Sorbring, 2018; Houen et al., 2016; Katsiada et al., 2018; Mashford-Scott & Church, 2011), this study explains, in some complexity, how children's agency is exerted in literacy-related situations and how it is associated with a number of family factors and children's early literacy skills.

The study supports the finding that, in general, preschool-age children are active partners in the reading dyad with parents. On average, children's agency was rated above the midpoint of the scale used, which is a favourable finding. However, the differences in these ratings among individual children are large, and there were children with high as well as low levels of agency. Because children use their agency in interpersonal situations with adults or peers, the exerted agency reflects not only their agentic ability but also the agentic potential of the situation. In the case of shared book reading, children participated in interactions with parents and employed as much of their agentic ability as the interactions allowed. Parents may vary in the degree their interactions support their child's agency, so the findings reveal not only the child's agency level but also the parents' sensitivity to its facilitation. This is in agreement with the literature documenting that families differ in providing support for their child in a range of reading-related activities (Haney & Hill, 2004; Hood et al., 2008; Justice & Ezell, 2002; Sénéchal & Le Fevre, 2002; Van Kleeck et al., 1997)

A significant implication of the study is conceiving specific components of agency, which serve distinct functions, rather than considering agency as one compact whole. Therefore, identification of agency components offers a nuanced account of what children do when interacting with parents over book contents. In this study, parents reported such children's agentic behaviours as requesting reading from them, selecting a book, insisting on continuing reading, and asking a range of questions about the story, characters and setting. Children also produced their own stories and imitated reading, and even checked whether parents were faithfully and accurately reading the story. By synthesising these behaviours, four agentic behaviour components were constituted that represent the child's volition, questioning, literary production and monitoring parents' reading.

Monitoring parent's reading by the child is a variable that has been rarely explored in agency studies. Yet, this monitoring exists in many families. In the previous study based on interviews (Gavora, 2016), parents described how children checked the parent's reading progression, mostly based on pictures that accompanied the stories. As each parent usually read the stories multiple times, the child was well acquainted with the topic, characters and plot. The child could recall the exact wording of the text, which made it possible for them to monitor their parent's reading and even substitute the non-read lines. Thus, even if the occurrence of monitoring of parents in this study was not a frequent variable, it helped in achieving a comprehensive picture of the child's agentic behaviour in shared book reading.

Another important finding is the hierarchical order of ratings on agency components. Parents rated highest on children's volition, followed by questioning, then followed by literary production and monitoring their reading. This rating pattern was constant through ages 3-6, indicating that it realistically reflects the difficulty of each agentic activity. A similar hierarchical order of children's

agentic behaviour was documented in other settings. For instance, Kuczynski, Pitman, and Twigger (2018) explored children's resistance to parents' attempts to control them. Three components of resistance were identified with varied degrees of children's independence: overt resistance, non-acceptance and covert resistance. In a preschool setting, children showed progression of agentic strategies ranging from silence to avoidance, negotiation, collaboration and partial acceptance (Markstrom & Halldén, 2009).

The other important result of the study is support for the distinction of passive and active HLE variables (Bracken & Fischel, 2008; Burgess et al., 2002), manifesting different parental involvement and bringing different benefits to the child (Newland et al., 2011; Phillips, Norris, & Anderson, 2008). The passive variables, represented by the number of books and parents' education, showed an insignificant correlation with the children's agency rating. On the other hand, all active HLE variables yielded significant correlations with the children's agency rating, although their magnitudes varied depending on the manner and extent of the children's engagement in shared book reading. Activities like children's listening to a parent reading (represented by variables of reading frequency, reading duration, time from the onset of reading) correlated lower with the children's agency rating than those variables that reflect the children's higher cognitive involvement in the shared book reading. Such activities are assisting the children when their story comprehension failed, explanations of the meanings of words, clarification of the story content and linking the story with a child's experience. Playing alphabetical games with children also significantly correlated with the children's agency rating, however, with a smaller magnitude. The two active HLE variables, comprehension facilitation and playing alphabetical games, were further supported by the regression analysis, where they showed significant predictive power on children's agency.

The confirmation of young children's agentic behaviours in the literacy context brings important consequences for their prospective behaviours. Gurdal and Sorbring (2018) claim that agentic behaviours vary depending on the specific situation or relationships and that children's early agentic experiences influence the way they act in future situations. In the family literacy context, the agentic behaviour has a high potential to occur in future situations (Kuczynski & De Mol, 2015). Children experienced successful opportunities in shared book reading and benefited from them, especially if they were appreciated by parents.

Though the agency rating scale used in this study proved good reliability and construct validity, it raises a question about the accuracy of the parents' rating of the child's agentic behaviour. Even though the parents' estimate was based on everyday experiences with the child, their rating might be imprecise. This problem was addressed by constructing specific rather than general items. For instance, parents were asked how often the child asks questions about pictures in the book rather than expressing how active the child is in a shared book reading. More specific items caused parents to focus on the particular activity rather than providing a holistic estimate. Second, the validity of parents' ratings is supported by hierarchical differences between the scores of agency components. Parents scored highest on items that assessed the child's requests, followed by a lower score on items concerning the child's questioning, and an even lower score on items concerning the child's literary production and monitoring parents' reading. This sequence clearly follows the natural frequency of occurrence of these activities as well as their difficulty. Thus, it can be anticipated that the parents' ratings reflect the extent of individual agentic behaviours of the child.

Children's early literacy was examined by the CAP test. Knowledge of print and text conventions, measured by this test, proved to be a variable that not only reflected children's exposure to books (like the number of children's books) but also was significantly associated with other family literacy characteristics and parents' literacy practices. Thus, this knowledge is strongly determined by

favourable family literacy-related conditions and childhood experiences (Dobbs-Oates et al., 2015; Justice & Ezell, 2002; Justice & Pullen, 2003; Levy et al., 2006).

Further research. This study offers a picture of literacy-related activities and their results within Czech families. The study sample consisted of a mainstream family population that provides, in general, favourable literacy, social, and cultural environments for children. It may prove valuable to provide an analysis with similar family samples in other countries, using corresponding research instruments, in order to identify the extent and quality of family literacy characteristics, parents' literacy practices and their contribution to children's early literacy skills. Such a comparative analysis may reveal patterns that these countries share and thus extend our understanding of early childhood literacy and its determinants.

Limitations of the study. The study has a number of limitations. First, the data on children's agency were collected through parents' ratings. Rating scales are commonly used in educational research to provide quantitative data, and are favoured for ease of administration and standardised statistical processing. However, rating scale data are blamed for their inaccuracy. Two arguments were presented to diminish the criticism: the rating scales were focused on a specific rather than holistic capturing of children's behaviours, and the pattern of rating scores on agency components was constant at all children's ages. However, this does not exclude other manners of exploring children's agency. It would be extremely useful to conduct direct observations of children's agentic behaviour in the family literacy context to provide comparative data.

Further, the home literacy environment data were based on frequencies and thus neither reflect the quality of children's agentic behaviours nor the quality of parents' literacy practices with children. Further research that will include both quantitative and qualitative measures might provide stronger predictive models of children's agency. Children in this study attended preschools. A variety of preschool classroom activities might have contributed to the promotion of their agentic capabilities. However, they were not considered in this study. Though the Czech preschool programme does not explicitly bind the teachers to promoting children's agentic behaviour, research in preschool classrooms, in addition to children's homes, would provide a more comprehensive picture of children's agency and its determinants.

Practical implications. This study offers two major practical implications to Czech parents. Since the family is the single most frequent context in which children grow up, there is a need to increase parents' awareness of the importance of creating a family environment that promotes children's agency. Parents should adopt a sensitive and responsive style during book reading that supports the agentic behaviour of their children. Even though Czech parents are frequently involved in reading to children, they may not be aware of the importance of the children's intentions and choices in shared book reading situations. On many occasions, they may view the children's behaviour as problematic because children act on behalf of themselves, rather than on the parents' behalf. Any campaign or interventional programme focussed on supporting children's agency in the Czech Republic must consider three steps: awareness raising, agency identification and agency support.

The other implication relates to the promotion of early literacy skills in the family. While the family reading campaigns in the Czech Republic are aimed primarily at creating positive attitudes towards books and a love for reading, they place less emphasis on supporting the development of children's early literacy skills, among them print awareness and knowledge of print conventions. Traditionally, the families emphasise frequency of reading to children as a single efficient activity, while this study supports parents' engagements in activities such as comprehension facilitation and alphabetical activities with children. Parents may not be aware of which activities to conduct and how to conduct

them to support their children's literacy skills. Therefore, special programmes and manuals should be offered to families to provide advice on how to implement efficient literacy development strategies. These actions and materials should also encourage parents to consider their children's agency as a source of their active participation in interaction in shared book reading.

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Appendix: Home literacy environment questionnaire

- The gender of your child: F M
- How old is your child?
- How old was your child when you began reading to them?
- How many books does your child possess?

Child's agency. Scale: never (1) - very often (5)

Volition

- How often does your child request reading?
- How often does your child select a book to be read to?
- How often does your child appeal to continue the reading session if the story ended?

Questioning

- How often does your child ask questions about pictures in the book?
- How often does your child ask about the meaning of unfamiliar words?
- How often does your child comment on the plot or characters?
- How often does your child pose why-questions concerning the story?

Literary production

- How often does your child retell the story as based on book images?
- How often does your child tell their own stories?
- How often does your child imitate reading (turns pages and narrates the story)?

Monitoring parent's reading

- How often does your child turn the pages when you are reading?
- How often does your child finger track during your reading?
- How often does your child admonish you if you omitted some lines of the text?

Parent's cognitive reasons to read to the child. Scale: strongly disagree (1) - strongly agree (5)

- • I read to the child because it improves reasoning.
- • I read to the child because it expands vocabulary.
- • I read to the child because it improves imagination.
- • I read to the child because it promotes memory.
- • I read to the child because it teaches about life.
- • I read to the child because it teaches about good and evil.
- • I read to the child because it expands knowledge of the world.
- • I read to the child because it prepares them for primary schooling.

Parent's emotional reasons to read to the child. Scale: strongly disagree (1) - strongly agree (5)

- I read to the child because it is a happy time to share with them
- I read to the child because it brings me joy.
- I read to the child because it develops the child's appreciation of books.

Frequency and duration of shared book reading by a parent and another adult in the family (two scales). Parent's comprehension facilitation. Scale: never (1) - very often (5)

- How often do you explain the meanings of words or phrases?
- How often do you explain a situation in a book when you feel the child does not understand?.
- How often do you ask questions about story characters, e.g. how the child likes them?
- How often do you ask the child to retell the story you read?
- How often do you link the story with the child's experiences?
- How often do you play letters- or numbers-games with your child?

Parent's alphabetical activities with the child. Scale: never (1) - very often (5)

- How often do you train writing letters/words with the child?
- How often do you sing songs with the child?
- How often do you play on the computer, tablet or smartphone with the child?

