Roots of Reading: Sequential Pathways from Parental Reading Beliefs to Children's Reading Motivation via Home Literacy Environment in a Nationally Representative Sample

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This research examines the mediating roles of the home literacy environment and parental reading beliefs in the relationship between children's motivation to engage with picture storybooks among preschoolers aged 36–72 months. Conducted in Türkiye using a correlational research design, the study collected data from 556 parents during the 2020–2021 academic year. The sample was nationally representative and selected from 12 cities identified according to the NUTS classification, using a convenience sampling model. To investigate both direct and indirect associations within the proposed framework, the study employed path analysis and sequential mediation analysis. Findings revealed that two components of the home literacy environment; namely, the amount of time parents spend reading with their children and the number of picture books available at home, fully mediated the relationship between parental reading beliefs and children's motivation to engage with books. These results highlight the pivotal role of the home literacy environment in shaping children's early reading motivation and suggest that parental beliefs influence children's engagement with books primarily through the literacy-related experiences and resources provided at home. Overall, the study underscores the importance of supporting families in fostering rich literacy environments to promote young children's interest in picture storybooks.

Introduction

The family, as a microsystem of society, is a social entity where individuals are born and develop. Early life experiences are permanent, and the family plays a crucial role in this process (Berns, 2016; Bronfenbrenner, 1979). A child's early interpersonal experiences in the early years take place in the family and are decisive for his/her development. The development of an individual's personality and academic success is decisively influenced by the family and home learning environment (Isaacs, 2012; Majzub & Rashid, 2012). A child's fundamental social experiences during early childhood predominantly occur within the family

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context, playing a pivotal role in overall development. The formation of personality, academic achievement, and individual preferences are all strongly shaped by familial relationships and the home environment (Tamis-LeMonda, Luo, McFadden, Bandel, & Vallotton, 2019; Hwang et al., 2022; Wang et al., 2022; Yıldız, 2023). In education field, socioeconomic status (Aslanargun, Bozkurt, & Sarıoğlu, 2016; Liu, Peng, & Luo, 2020; Sarier, 2016), parental education (Kihara, 2022, Ergül et al., 2020) and previous experiences (Cunningham, 2008) are important variables affecting academic success. Early language skills are also considered a strong predictor of success (Gibson et al., 2021; Justice, Jiang, Bates, & Koury, 2020; Kızgın & Baştuğ, 2020). It has long been highlighted that families support children's language development (Battle, 2009; Timmons & Pelletier, 2014).

Reading is necessary for an individual's adaptation to society and quality of life (Nutbeam, 2008; Plomp, 2013). In today's digital era, reading skills are important in terms of the use of technological tools in business and daily life (Tyner, 2014). A core goal of education is to raise literate individuals (UNESCO, 2009). Therefore, it is fundamental to assist reading skills at an early age and develop literature in this direction.

Parent Reading Belief

Pajares (1992) emphasized that knowledge is central to organizing cognitive functions, whereas beliefs affect not only thinking but also emotional experiences. Within the framework of family-child interactions, emotional and cognitive facets are closely interconnected. As a result, research primarily focuses on exploring the beliefs held by parents rather than solely examining knowledge (Jones & Prinz, 2005). Parents' beliefs are shaped by their own life experiences, the cultural expectations they encounter, and their ongoing interactions with their children. These beliefs are closely connected to parenting styles, child development, and the roles within families (Rowe & Cassilas, 2010). The beliefs that parents hold about reading directly influences language acquisition and holistic child development. The term "parent reading belief" (PRB) refers to the behaviours exhibited by parents in relation to language and literacy, which in turn shape their children' interpretations of events and choices in reading materials (Weigel et al., 2005). Families with strong reading beliefs actively support children's language development by fostering enriched home literacy environments. Weigel et al. (2006a) demonstrated that parents' reading beliefs serve as more powerful indicators of children's writing abilities than the actual literacy activities conducted at home. Likewise, DeBaryshe (1995) emphasized that these beliefs contribute to longer and higher-quality shared reading experiences between parents and children, highlighting their significant role in early language and literacy growth.

Home Literacy Environment

The Home Literacy Environment (HLE) refers to the important role families have in shaping children's early skills in reading, writing, and language. It involves not only the presence of printed materials like books but also the everyday interactions and conversations that help children learn language (Payne et al., 1994; Gonzales et al., 2011). Research shows that a rich Home Literacy Environment (HLE) helps children grow mentally and emotionally (Sylva et al., 2004) and supports their early reading and writing skills (Hamilton, 2013; Purcell-Gates, 1996; Weigel et al., 2006a; Weigel et al., 2006b). It also helps children become aware of sounds in language (Hofslundsengen et al., 2019; Van Tonder et al., 2019) and strengthens their basic reading and writing skills by providing both mental and social support (McElvany & Bartelt, 2009; Hunt et al., 2011).

Children develop foundational literacy skills during early childhood primarily in the HLE (Purcell-Gates, 1996). HLE is affected by the family's socio-economic conditions, cultural background, and parental attitudes (Bronfenbrenner, 1979; Aikens & Barbain, 2008). While some families prioritize parental involvement in language development, others rely more on school (Stone et al., 2014). The home literacy environment consists of social and physical dimensions; the social dimension includes parent-child interactions, and the physical dimension includes accessible materials (Foy & Mann, 2003).

Meaningful interactions, a variety of learning opportunities, and the promotion of children's competencies are important for creating a nurturing HLE (Niklas, 2015). Children raised in enriched environments tend to develop advanced language skills at an early age (Hood, Conlon, & Andrews, 2008; Niklas & Schneider, 2013; Niklas, 2015). Access to a variety of literacy materials has been shown to improve both their receptive and expressive language abilities (Mol & Bus, 2011). Early home literacy experiences also support academic achievement and school success (Sylva et al., 2004), while influencing children's reading motivation and perceptions.

Child's Reading Interest and Motivation

Former US Secretary of Education Terrell Bell said, "Three things are important in education: motivation, motivation, and motivation" (Ames, 1990). One of the key factors influencing academic performance is motivation (Areepattamannil, & Freeman, 2008; Areepattamannil, 2010; Gottfried et al., 2007). Research shows that early literacy develops with the acquisition of pre-reading skills before starting formal education (NELP, 2008; Altun, 2016; Işıtan, Saçkes, & Biber, 2020).

While existing studies generally focus on the attitudes and motivations of primary school children and above (Wilson & Trainin, 2007; Baker & Scher, 2002; Gönen et al., 2004; Öztürk & İleri Aydemir2013), understanding the reading attitudes and motivations of preschool children is of critical importance because early literacy skills begin to develop at a young age. It has been found that exposure to books in early childhood is directly related to the continuity of reading interest, and this shapes personality development and receptive and expressive language skills (Laakso et al., 2004). In addition, according to Senechal (2009), children who have more reading experience before starting formal education are more likely to enjoy reading later on.

Research on children's reading attitudes and motivation has largely focused on elementary school and older age groups (Gambrell, Palmer, Codling, & Mazzoni, 1996; Wilson & Trainin, 2007; Baker & Scher, 2002; Gönen et al., 2004; Öztürk, et.al., 2013). However, early literacy skills begin developing at a young age (NELP, 2008; Altun, 2016). Studies show that children who are exposed to books early demonstrate higher reading interest and positive development in language, expression, and personality (Laakso et al., 2004; Işıtan & Gönen, 2006; Sénéchal, 2009). The home literacy environment and parental reading beliefs are also important factors influencing children's motivation (Weigel et al., 2006a; Applebee, Langer, & Mullis, 1988). Therefore, examining individual and environmental factors that affect preschoolers' reading motivation can make a significant contribution to the literature.

Current Study

The hypothesis of this article is "Parent reading belief and home literacy environment have a sequential effect on the relationship between child's perceived motivation for reading

picture books and gender, family income level, child's age, mother's education level, father's education level, mother's age, father's age, time spent by the child at the tablet, the length of time the child attends pre-school education, the number of adult books at home, the time the parents read to the child, the time the child spends alone with the book, the number of picture books at home, the time the child watches television.".

- Independent Variables: Gender, household income, the child's age, parental education levels, parental ages, the amount of time the child uses a tablet, duration of preschool attendance, the number of adult books in the home, how much time parents read to the child, how much time the child spends independently with books, the quantity of picture story books available at home, and the amount of time spent watching television.
- Mediator Variables: Parent reading belief and home literacy environment
- Dependent Variable: The child's perceived motivation for reading picture books

Method

Research Design

      To examine the study's core inquiries, a relational screening design was used. Known as correlational research, this design investigates variable relationships without external interventions. Researchers aim to measure variables in natural contexts and understand their connections within the relational design (Creswell, 2012). Adopting a predictive relational screening design, the study examines how one variable can be predicted through others (Creswell, 2012). Consideration of third-variable effects alongside cause-effect relationships is vital (Christensen et al., 2015). Thus, the study analyses models with 14 independent (Gender, household income, the child's age, parental education levels, parental ages, the amount of time the child uses a tablet, duration of preschool attendance, the number of adult books in the home, how much time parents read to the child, how much time the child spends independently with books, the quantity of picture story books available at home, and the amount of time spent watching television.), 2 mediators (Parent reading belief and home literacy environment), and one dependent variable (The child's perceived motivation for reading picture books) through path analysis.

Participants

      The sample group consists of 624 families with 48-60-month-old children attending pre-school education. However, 32 participants with incorrect control question responses were removed, as well as those who answered without reading. As highlighted in literature (George & Mallery, 2016), pre-analysis assumptions were checked. After excluding 36 outliers, 556 participants' data were analysed.

Participants were chosen based on a convenience sampling strategy. This method offers advantages in terms of affordability, usability, and viability (Fraenkel & Wallen, 2009). However, the literature highlights some disadvantages of this method, such as the risk of low representativeness of the sample group for the population and issues with inadequate data collection (Creswell, 2012). Nomenclature of Territorial Units for Statistics (NUTS) classification system was used in order to minimize these disadvantages and enhance diversity within the sample. A total of 12 cities from the 12 regions in Türkiye classified using the NUTS were selected randomly. The chosen cities are, respectively, Adana, Amasya, Ankara,

Balıkesir, Erzincan, Istanbul, Izmir, Mardin, Sakarya, Sivas, Trabzon, Van. The data were gathered from the cities that are highlighted in pink in the map of Türkiye.

Figure 1: The map of Türkiye displaying the regions where the data was gathered

Instruments

Home Literacy Environment Questionnaire (HLEQ)

Designed by Marjanovic Umek, Podlesk, and Fekonja (2005), the Home Literacy Environment Questionnaire (HLEQ) is used to assess how effectively the home context supports children's language and literacy abilities. Comprising 32 items, the original scale encompasses five sub-dimensions. The Turkish version named "Home Literacy Environment Scale," emerged from Altun's 2013 adaptation, maintaining 32 items and five sub-dimensions. It lacks reverse-scored items. In the adaptation phase, the scale's reliability coefficient was computed at 0.91. The statistical analysis addressed item validity and reliability with the adapted data. Cronbach's Alpha in the original study was reported as 0.91, but it dropped slightly to 0.89 after the adaptation. In the present study, Cronbach's alpha was utilized to determine reliability, with subscale scores between 0.76 and 0.88, and the overall score was 0.92, showing strong consistency.

Perceived Perceptions of Reading Picture Story Books for Children Motivation Scale (PSBCM)

The PSBCM, developed by Saçkes, Iştan, Avcı, and Justice (2015), is a 5-point Likert scale completed by parents to assess their perceptions of their child's motivation for reading at home. The original study reported good internal consistency, with Cronbach's alpha values ranging from 0.82 to 0.90. Confirmatory Factor Analysis (CFA) confirmed that the 19 items grouped into four distinct factors, with strong fit indices: $\chi^2 = 328.81$, df = 146, p < 0.001; NNFI = 0.98; CFI = 0.99; AGFI = 0.99; and RMSEA = 0.063. In the current research, the scale's reliability was also confirmed, showing Cronbach's alpha scores between 0.76 and 0.84 for subscales, and an overall coefficient of 0.92, demonstrating high reliability.

Parent Reading Belief Inventory (PRBI)

The scale developed by DeBaryshe and Binder (1994) evaluates parents' perceptions regarding their participation in reading activities alongside their children. Results showed Cronbach Alpha coefficients of 0.50 to 0.85 for the seven sub-dimensions. Exploratory Factor Analysis revealed factor loads between 0.31 and 0.88. For retest reliability, the scale was re-administered in 25 families and the correlation coefficient between the two applications was

found to be 0.79. The scale underwent two adaptations for Turkish use. In the final adaptation (Şimşek Çetin, Bay & Alisinanoğlu, 2014), efforts were made to address the shortcomings identified in previous studies and enhance the scale's reliability by involving a larger sample. This last adaptation involved 952 parents (749 mothers and 181 fathers), resulting in a scale with 7 sub-dimensions and 39 items, down from the original 42. Notably, items 8, 30, and 31 were excluded due to their low t-scores, as advised by experts in the field. Confirmatory Factor Analysis affirmed a 7-factor structure with 39 items, displaying solid fit indices like $\chi2/sd=2.82$, RMSEA=0.067, SRMR=0.056, CFI=0.93, GFI=0.91, and IFI=0.93. The correlations between the sub-dimensions and the overall score ranged from 0.36 to 0.83. Within the current research, the reliability analysis using Cronbach's alpha showed subscale values between 0.68 and 0.82, while the total reliability coefficient was 0.89.

Data Collection Procedure

The research's data collection phase began after it received ethical approval. Data was gathered through emails, platforms used by preschool parents, and online text-based message boards from parents. The introduction of the form clearly stated that only parents of preschool-aged children should complete it, and non-parent individuals were instructed not to fill it out; additionally, this was verified through control questions. Input was also sought from well-known children's book authors, editors, and illustrators who maintain an extensive online presence. The pandemic made it difficult to reach parents in the sample group directly, thus as a safety measure, online data gathering technologies were chosen. Since data collection occurred during the pandemic, parents expressed no concern about completing the scale, as digital platforms eliminated the risk of disease transmission.

Data Analysis

The data were analysed using Amos 24, Lisrel 8.80 and SPSS 24.0 software in a computer environment. The research aimed to explore whether a direct relationship exists among fourteen independent variables namely, Gender, household income, the child's age, parental education levels, parental ages, the amount of time the child uses a tablet, duration of preschool attendance, the number of adult books in the home, how much time parents read to the child, how much time the child spends independently with books, the quantity of picture story books available at home, and the amount of time spent watching television and one dependent variable, which is the child's perceived motivation to read picture books. Additionally, the study aimed to determine how the mediating variables, PRB and HLE, influence this relationship. The results showed meaningful relationships between the dependent variable and seven of the independent variables: gender, mother's education, parental reading time, number of picture story books at home, child's television viewing time, number of adult books at home, and time the child spends alone with books. Following this, mediator variables were incorporated into the model, and the proposed structural configuration was tested.
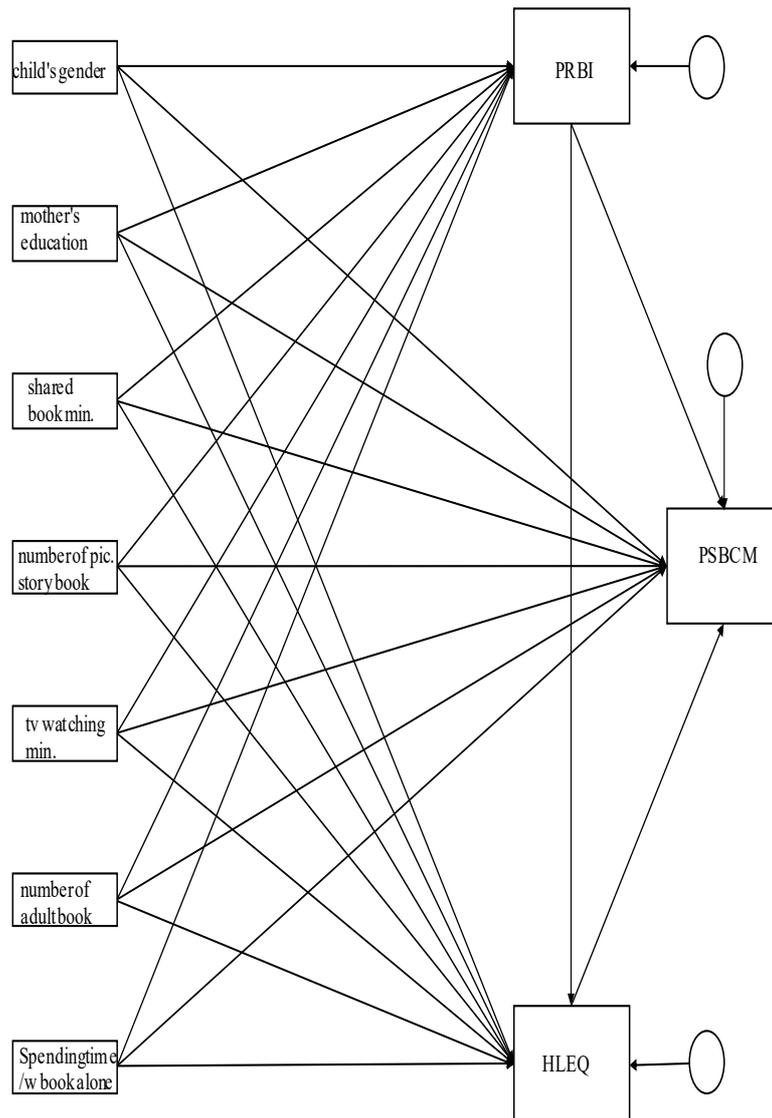
Figure 2: Diagram showing the simplest version of the model tested

The study began by analysing data from 556 participants to examine the demographic characteristics of the parents using percentages and frequencies. The correlations between the variables under consideration were then explained by a theoretical model, which was then put to the test via path analysis. A mediation analysis was conducted by determining the variables that exhibited characteristics of mediators among the sequential mediators and the variables being investigated. A significance threshold of 0.05 was used to interpret the results of the study's statistical analyses.

Path analysis is a statistical approach employed to investigate direct as well as indirect connections among variables (Klem, 1995). This method is employed to analyse complex models, and a significant advantage is the control of error variables (Streiner, 2005). In this study, both direct and indirect effects between dependent and independent variables were investigated using path analysis. Kline (2015) emphasized that for indirect effects, one or more mediating variables are required to convey the causal effects of previous variables onto

subsequent ones. Therefore, indirect effects were also considered as mediated effects in this research. This study utilized a sequential mediation model. To facilitate a clearer understanding of this complex model, a visual representation and detailed explanation are provided below.
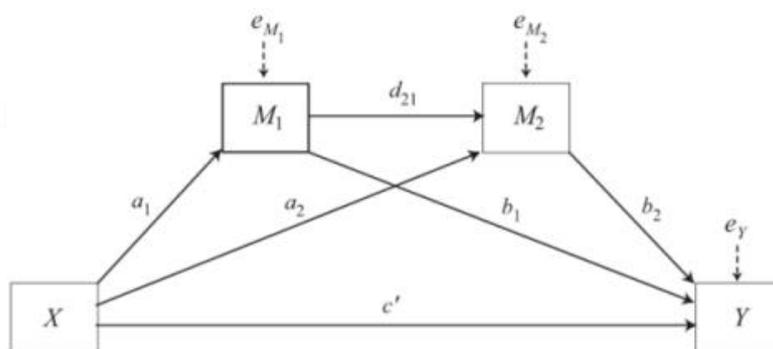

Figure 3: Diagram demonstrating the connection examined for each independent variable

Note: X: Independent variables (Child's gender, mother's educational background, quantity of adult
     books available at home, quantity of children's picture books at home, duration of parents
     reading aloud to the child, time the child spends reading independently, amount of time the child
     watches television, M1 (PRB) and M2 (HLE) Mediator variables, Y dependent variable (Child's
     Perceived Motivation for Reading)

The provided diagram illustrates a sequential mediator model involving an independent variable. Although its interpretation varies slightly, it shares similarities with the basic mediator model. In the sequential mediator model, represented by multiple mediators (M1, M2), the total effect (c) and the direct effect (c*) remain akin to the simple mediator model. Indirect effects of "X" on "Y" through "M1" are represented by "a1b1", while those through "M2" are denoted as "a2b2". Combining both mediator variables yields an indirect effect of "a1d21b2". The total effect comprises these three indirect effects and direct effects (c=c*+ a1b1+ a2b2+ a1d21b2). The total indirect effect is evaluated as c-c* = a1b1+ a2b2+ a1d21b2 (Hayes, 2013), with c* tested for significance, similar to the simple mediator model. The Sobel test (Sobel, 1982) assesses the significance of indirect effects in the established sequential mediator models within the study's scope.

Findings

The study aims to examine the sequential mediation model, considered a theoretically significant approach. Within this model, which involves two mediating variables, specific conditions must be met for the variables to function as mediators (Hong et al., 2019; Tofighi & Kelley, 2020). Therefore, during the sequential mediation analysis, it is necessary that the independent variable (X) significantly affects both mediator variables (M1-M2), the mediator variables (M1-M2) significantly influence the dependent variable (Y), the independent variable (X) has a significant effect on the dependent variable (Y), and the first mediator (M1) significantly impacts the second mediator (M2). In this study, direct and indirect effects were examined for each independent variable in a model consisting of seven independent, two intermediary and one dependent variables, and the simplest version of the relevant model

sample path diagram was presented. The diagram of the simplest model derived from the conducted analyses can be seen below.
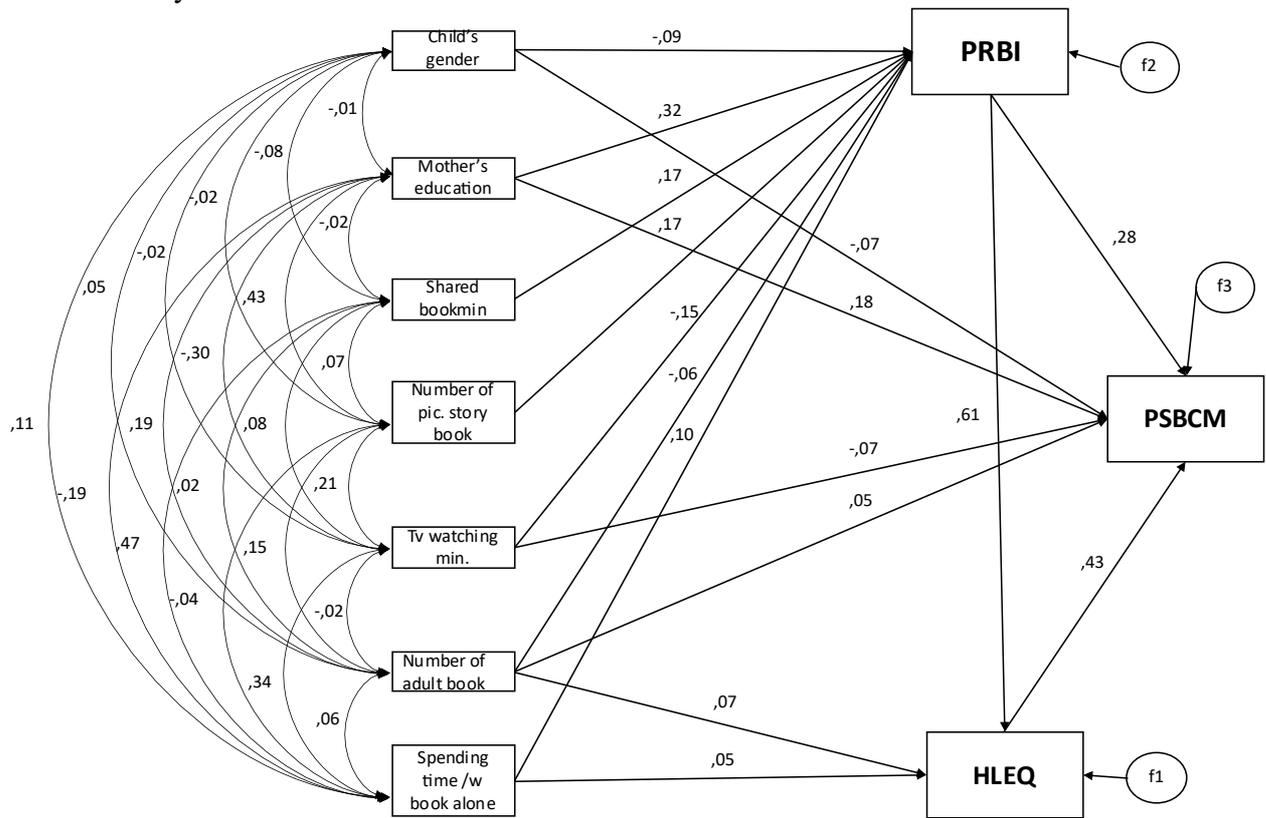

Figure 4: Diagram of the simplest model derived from the conducted analyses

After excluding statistically non-significant paths, the model was simplified. In the finalized model, the independent variables gender, mother's education level, child's television viewing time, and the total count of adult books at home along with the mediators of family reading belief and home literacy environment accounted for approximately 58% (R^2 = 0.58) of the variance in the child's perceived motivation to engage with picture storybooks. Additionally, the independent variables of time the child spends reading alone and the number of adult books at home, together with the parental reading belief variable (PRBI), explained about 39% (R^2 = 0.39) of the variance in the home literacy environment (HLEQ). Similarly, the independent variables contained within the final model explained nearly 29% (R^2 = 0.29) of the variance in parent reading belief (PRBI). The fit indices for the simplest model are shown in Table 1 to demonstrate its adequacy.

Table 1. Model Data Fit Criteria for the Simplest Model

Fit Measure	Model Values	Good Level of Compliance	Acceptable Level of Compliance	Comment
χ^2 / Sd	2.62	$0 \leq \chi^2/Sd \leq 2$	$2 < \chi^2/Sd \leq 5$	Acceptable
RMSEA	0.05	$0 \leq$ RMSEA ≤ 0.05	$0.05 <$ RMSEA ≤ 0.08	Good
CFI	0.97	$0.97 \leq$ CFI ≤ 1.00	$0.95 \leq$ CFI < 0.97	Good
NFI	0.96	$0.95 \leq$ NFI ≤ 1.00	$0.90 \leq$ NFI < 0.95	Good
GFI	0.99	$0.95 \leq$ GFI ≤ 1.00	$0.80 \leq$ GFI ≤ 0.95	Good
AGFI	0.99	$0.95 \leq$ GFI ≤ 1.00	$0.85 \leq$ AGFI ≤ 0.95	Good

As seen in the table, $\chi 2$ / sd= 2.62 was obtained in the model established within the scope of the research. This value is at an acceptable level. Since the RMSEA value is equal to 0.05, it was seen that the fit for this index was at a good level. Similarly, it was determined that CFI, NFI, GFI and AGFI values above 0.95 showed good agreement (Schermelleh Engel et al., 2003). Considering all the results collectively, it was determined that the final model developed in the study demonstrated a good fit with the data.

Discussion

In this study, gender was considered as the first independent variable. The model results show that gender significantly affects children's reading motivation towards picture storybooks; girls have higher motivation than boys. There are different views in the literature on whether gender is a determining factor (Keklik, 2009). While this study does not overlap with some studies, it is parallel to these studies (DeBaryshe & Binder, 1994; Saban & Altınkamış, 2018; Wu & Honig, 2010). While literacy interest in early childhood is positively correlated with gender, girls' reading motivation is higher than boys' at later ages (Baroody & Dobbs-Oates, 2011). Studies show that gender plays a role in shaping parents' reading beliefs and children's motivation, but there exists no meaningful connection between the gender of the child and HLE. Factor contributing to lower reading attitudes among boys is the lack of sufficient male role models (Alloway, 2007) and the conception of reading as a socially feminine hobby (Serafini, 2013). It is important to acknowledge that, as the data were gathered from families rather than directly from children, the findings may have been affected by the families' gender norms.

According to the study model, the mothers' level of education is identified as the second independent variable. A positive correlation exists between mothers' level of education and how they perceive their children's motivation to interact with picture storybooks. The findings show that a higher level of maternal education positively affects parental reading beliefs, which in turn strengthens the literacy environment at home and increases children's motivation to read. The findings confirm the presence of a sequential mediation effect indicating that the level of maternal education indirectly affects children's motivation through PRB and HLE (Duncan & Brooks, 2000; Justice et al., 2020; Manu et al., 2023; Mantzicopoulos, 1997). Research indicates that mothers with higher literacy levels tend to be more deliberate in organizing their children's educational environments than mothers with low or moderate literacy skills (Costache, Cojocaru, Cojocaru, & Bunea, 2025; Saban & Altınkamış, 2018; Gönen et al., 2022). It is stated that as the level of education increases, mothers participate more in the educational process of their children and allocate more resources to social-cultural activities (ERG, 2022). This study highlights that although maternal education level does not directly affect the literacy environment at home, it indirectly increases children's motivation to read by strengthening parental reading beliefs.

An additional element included in the study model is the duration of time parents dedicate to reading with their children. According to the results, an increase in parents' reading time is associated with a rise in children's motivation to read picture story books. In addition, the increase in the time parents allocate for reading strengthens parents' reading beliefs and increases the quality of the literacy environment at home, which positively affects children's motivation. Studies consistently demonstrate that parental read-aloud activities play a crucial role in children's language development (Dobbs-Oates et al., 2015; Senechal, 2009; Sonnenschein & Munsterman, 2002; Weigel et al., 2006a). Researchers are paying growing attention to how emotional characteristics of home literacy experiences and familial

influences affect children's motivation, attitudes, and interest in reading (Elias, 2010; Lee & Yeo, 2014; Wiescholek et al., 2018; Yeo et al., 2014). The research results are parallel to these findings. It has also been stated that physical interaction and parental response style during the reading process have an important effect on children's motivation (Sonnenschein & Munsterman, 2002). Theoretically, the research supports the concept of scaffolding in Bruner's theory of cognitive development; based on Bruner's perspective, children rely on the help of knowledgeable others to comprehend their surroundings (Bruner, 1983). As a result, increased time that parents dedicate to reading with their children tends to strengthen parents' reading beliefs and enrich the home literacy environment, that together be a factor in higher motivation for children to engage with picture story books and reading in general.

The model shows that parental reading beliefs (PRB) completely explain how the amount of time parents spend reading influences children's motivation to read picture storybooks. Full mediation refers to the condition in which the association between the independent and dependent variables is no longer present after accounting for the mediator in the model (Baron & Kenny, 1986). When parental reading beliefs are low, increasing the amount of time parents spend reading with their children does not significantly impact children's reading motivation, as parental reading belief serves as a full mediator in this relationship.

The total number of picture storybooks in the home is likewise part of the model. The results indicate that a higher number of picture storybooks at home is associated with increased motivation in children to read these books. Additionally, an increase in the quantity of picture storybooks at home enhances parental reading beliefs, which in turn positively influences the quality of the home literacy environment. Consequently, improvements in the home literacy environment have a beneficial effect on children's reading motivation. This part of study's results aligns with Bronfenbrenner's Bioecological Theory, that suggests that children's developmental process is shaped by their engagement with both living and non-living elements in their surroundings (Bronfenbrenner & Morris, 1998). Similarly, Piaget's Constructivist Approach argues that children can acquire the necessary skills on their own with appropriate environments and opportunities. Exposure to various print resources and literacy materials at home increases the likelihood that children will improve their language skills alongside literacy competencies (Inoue et al., 2018). In the light of Piaget's theory, children progress through specific stages of cognitive development and complex skills are supported by previous sub-skills (Tzuo, 2007). Justice and Sofka (2010) emphasize that the availability of print materials and children's access to reading resources within the home environment helps them grasp fundamental reading concepts, such as the flow of text, the role of written language in conveying messages and the awareness that words are formed from separate letters. The model demonstrates that parents' beliefs about reading influence their children's motivation to read indirectly, through the total mediating role of the quantity of picture story books present in the home. This means that even if there are many books available, if parents do not hold strong reading beliefs, the child's motivation to read is unlikely to improve. In this context, the primary factor influencing a child's motivation to read is the parent's belief in the value and importance of reading

One additional independent variable considered in the model is the duration of the child's television viewing time. When the model outputs are examined, it is understood that as the amount of time the child watches television increases, the child's motivation to read picture books decreases. In addition, it was concluded that the amount of screen time watching television negatively affects the reading beliefs of families. Television is a tool through which children are exposed to intense visual and auditory stimulation. Researchers working in the

field of neuroscience show that visual and auditory stimulation exposed at an early age strengthens the synaptic connections in children's brains (Black et al., 2017). Nonetheless, this situation does not parallel the research findings. In this context, it can be concluded that not every visual and auditory stimulation that the child is exposed to is beneficial. Research shows that mothers communicate less and less sensitively with their children while watching television (Nathanson & Rasmussen, 2011). These results reinforce the conclusion that greater television exposure corresponds with decreased PRB, a less supportive HLE, and lower motivation in children to read picture story books.

The model also includes the quantity of adult books available at home. An increase in the number of these books is associated with higher parental perceptions of their children's motivation to engage with picture storybooks. This increase positively influences parents' reading beliefs, which subsequently enhances the quality of the home literacy environment and supports children's motivation to read. Additionally, a sequential partial mediation effect was found, with parental reading beliefs and the home literacy environment mediating the relationship between adult book quantity and children's reading motivation. Previous research highlights the importance of book availability at home for literacy development (Bahadır, 2012; Baroody & Dobbs-Oates, 2011; Dadandı, Dadandı, & Koca, 2018; Entorf & Tatsi, 2009; Giambona & Porcu, 2015; Zasacka & Bulkowski, 2017). For instance, Entorf and Tatsi (2009) found that having over 100 books at home can improve PISA scores by more than 30 points. While many of these studies rely on PISA data, they emphasize that early reading motivation is a key indicator of future academic achievement (Elder, 2004; Baroody & Dobbs-Oates, 2011). The present results align with previous research in this area.

The final independent variable in this model is the time a child dedicates to interacting with books on their own. Analysing the model outputs reveals that the overall impact of the child's solitary reading time on their perceived motivation to read picture storybooks is not statistically significant. Nonetheless, when examining the direct effects, findings indicate that as children spend more time engaging with books independently, there is a corresponding positive impact on both PRB and the quality of HLE. Studies show that spending time by herself/himself with a book at an early age increase reading success, enjoys reading, improves vocabulary, and supports early literacy skills (Laakso et al., 2004; Senechal, 2009; Pagan, 2010). All these studies show parallelism with the findings of the research. Research findings also support Piaget's Constructivist Approach. Piaget argues that children are little scientists and that they can construct the necessary skills themselves if appropriate environment and opportunities are provided for them. Writing, which is the sub-skills of a complex action such as spending time with the book by the child, examining the pictures and writings in the book, contributes significantly to enhancing their letter recognition skills.

Conclusion

The model indicates that every independent variable impacts PRB, unlike the HLE variable. This suggests that PRB holds more significance in the child's reading development. The research results indicate that although all independent variables have a direct impact on PRB, only the quantity of adult books and the time a child spends reading independently has a direct impact on the quality of the HLE. Despite this situation, the HLE plays an indirect mediating role between all independent variables and the child's perceived reading motivation. During the 2020-2021 pandemic period when the research was conducted, children had limited access to school and engaged in the majority of their time home.

Data provided by the United Nations Educational, Scientific and Cultural Organization (UNESCO) indicate that, between August 2020 and July 2021, Turkey was the fourth among OECD countries in aspects of the duration of school closures (ERG, 2021). During this time, preschool-aged children were able to attend school for only 109 days. The World Health Organization (WHO, 2020) emphasized that, amid the pandemic, homes transformed into learning environments, and educational disparities deepened as a result. Findings from the current study point to a mediating effect of the home literacy environment (HLE). It was found that in families where parental belief in reading is strong, the home literacy environment tends to be of higher quality. Conversely, limited early access to educational resources in the home was shown to negatively affect children's willingness to read. Although parental reading belief was associated with several independent variables, the most critical predictor was identified as the mother's level of education. Therefore, for families where maternal education is limited, increasing educational opportunities for mothers and providing children with enriched literacy materials should be seen as key intervention strategies. Such strategies may include limiting children's screen time and expanding access to diverse print resources like picture books, magazines, and encyclopedias within the home. In general, the study highlights the crucial role of the family and home environment in early childhood development. A particularly significant result reveals that parental reading belief fully mediates the association between parents' educational attainment and their child' motivation to read. In essence, even in highly educated families such as those with parents working as lawyers, academics, architects, or engineers, low levels of reading belief can still negatively affect children's motivation to engage in reading activities.

Limitations

A limitation of the study is the risk of social desirability bias, as parents may overreport reading habits at home, viewing them as a reflection of parenting quality (Hofferth, 2006; Mol & Bus, 2011). The study assumed parents responded honestly. Another limitation is recall bias, since parents may struggle to accurately report the frequency and timing of certain behaviors (Morsbach & Prinz, 2006; Schwarz & Oyserman, 2001). However, prior research suggests that memory effects are less problematic in correlational studies, with participants generally providing realistic responses (Eck, Klesges, & Hanson, 1989; Burns et al., 2001).

Suggestions for Future Research

During the pandemic, children's reading motivation was assessed through parent reports rather than direct child data; future research should address this gap. Given that 75% of the sample consisted of low- and middle-income families, the model fit for children's tablet use was limited, suggesting the need for parent-focused educational programs and replication with high-income groups. As research on early reading motivation remains scarce, further studies should consider sub-dimensions of scales rather than total scores. Projects that enhance family reading beliefs and home literacy quality are encouraged. Findings highlight that the availability of picture storybooks and adult books positively affects children's reading motivation, underscoring the importance of children's libraries for families with limited access to books.

Declarations

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