A Socioeconomic Comparison of Emergent Literacy and Home Literacy in Australian Preschoolers

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Abstract

Family socioeconomic status (SES) and home literacy practices impact upon children's early literacy development. The present study explored where current emergent literacy and home literacy differences lie in Australian preschoolers aged 3 to 5 years from lower SES (n = 49) and higher SES (n = 52) homes. Children were assessed on letter knowledge, print concepts, and name writing. Parent literacy teaching, story book reading, and home literacy resource data were gathered via a home questionnaire. Duration of parent-child reading was similar for both SES groups. Lower SES parents taught their children less frequently about print compared to higher SES parents with lower SES children performing more poorly on print skills. This suggests that home reading may not be sufficiently fostering print skills in lower SES children highlighting the need for policy makers to enable lower SES parents to engage in more print-based strategies to help bridge the literacy gap.

Keywords: emergent literacy; home literacy; socioeconomic status; preschoolers; parents

Introduction

Family socioeconomic status (SES) impacts upon children's early literacy development which in turn affects future reading ability and life outcomes (Arnold and Doctoroff 2003; Snow, Burns, and Griffin 1998). Poor reading ability has long-term consequences because literacy underachievement is linked to high social, health, and economic costs (e.g., Australian Government, 2005). The Australian Early Development Index, AEDI (Australian Government, 2009) reported that one-third of children living in socioeconomically disadvantaged communities are at significant risk of developing future reading and writing difficulties. By five years of age, children who cannot identify and name some letters of the alphabet, attach sounds to some letters, write some letters and their name are considered developmentally vulnerable and 'not on track' (Australian Government, 2009). These emergent literacy skills (e.g., alphabet knowledge, print concepts, and early writing) develop through sociocultural experiences from birth and are important because they are strong predictors of conventional reading and writing ability (Adams 1990; Cohen and Cowen 2011; Teale and Sulzby 1986; Whitehurst and Lonigan 1998).

Emergent literacy skills are influenced by socio-cultural factors including people (e.g., parents) and materials such as books and surrounding print (Bodrova & Leong, 2007). Viewed from Vygotsky's (1978) socio-cultural perspective, parents play a key role in scaffolding (Wood, Bruner, and Ross, 1976) children's early literacy learning (Clarke-Stewart and Beck, 1999; Dodici, Draper, and Peterson, 2003; Vandermaas-Peeler, Nelson, Bumpass, and Sassine, 2009). Through socio-cultural interactions with print and explicit guidance by a parent or adult, children develop foundational emergent literacy skills (Haney and Hill, 2004; McGee and Richgels, 1989). Parents scaffold their children's print experiences through story book reading (e.g., Bus, Belsky, van IJzendoorn and Crnic, 1997), early writing (e.g., Aram and Levin, 2002), and

pointing out environmental print (e.g., Neumann, Hood, and Neumann 2009) which fosters children's knowledge and understanding of print. For example, Umek, Podlesek, and Fekonja (2005) found that children who experienced maternal guidance through their *zone of proximal development* (Vygotsky, 1978) during reading activities possessed higher language skills. As maternal guidance was found to be positively associated with the level of maternal education it is suggested that more highly educated parents are better equipped to engage children in stimulating literacy activities (Korat, 2009; Umek et al. 2005).

Socioeconomic factors such as parental education, occupation, and family income greatly shape the home literacy environment and the extent of early print experiences (Farver, Xu, Eppe, and Lonigan 2006; **Kluczniok, Lehrl, Kuger, and Rossbach 2013**; Korat 2009; Leseman and DeJong 1998; McLoyd 1998; **Umek et al. 2005**). Home literacy encompasses exposure to story books, home access to printed materials and resources, and parent-child engagement in literacy activities (Aram, Korat, and Hassunah-Arafat 2013; Korat 2005; Lynch 2008; Purcell-Gates 1996). These home literacy factors in turn influence the development of emergent literacy skills (Evans and Shaw 2008; Farver et al. 2006; Leseman and DeJong 1998; Schiff and Ravid 2012; Sénéchal, Le Fevre, Thomas, and Daley 1998). Substantial evidence shows that children from low-income households, who have parents with low education and occupation levels are at a greater risk of reading failure compared with children from higher SES backgrounds (Bowey 1995; Farver et al. 2006; Foster, Lambert, Abbott-Shim, McCarty, and Franze 2005; Hart & Risley, 1995; Korat 2005; Schiff and Ravid 2012; Snow et al. 1998). **For example, Kluczniok et al. (2013) examined the relationship between SES and home literacy environment in 513 families residing in two German states (Bavaria and Hesse). Klucziok et al. (2013) found that higher SES and maternal education was associated with greater literacy stimulation and richer literacy**

resources at home. It is important to further examine specific home literacy factors such as home literacy practices and resources that may be contributing to the literacy gap between low and high SES families. This will help in the design of effective family programs that foster emergent literacy skills in low SES children.

Purpose of the study

The present study explored where current inequalities in emergent literacy and home literacy exist within a sample of low SES and high SES Australian families so that practical recommendations for supporting emergent literacy development in low SES families can be made. Firstly, the associations between preschoolers' emergent literacy skills (print concepts, letter name and sound knowledge, name writing), home literacy environment (story books owned, alphabet resources, story book reading, parent literacy teaching) and family SES (parental education and occupation) were examined. As previous research has shown that lower SES children have lower emergent literacy abilities and poorer home literacy environments compared with higher SES peers it was expected that SES would be related to these factors (e.g., Korat 2005). Secondly, emergent literacy and home literacy practices and literacy resources of both SES groups were compared to explore where differences and similarities lie. These findings highlighted factors influencing the SES gap whilst informing policy on home literacy strategies needed to meet the needs of low SES Australian children.

Method

Participants

A total of 101 preschool children aged 3 to 5 years (M = 50.08 months; SD = 5.96; range = 38-62 months) from south-east Queensland, Australia participated in this study. All children (49 girls and 52 boys) were typically developing and spoke English as their main

language at home as indicated by a parent questionnaire. Any children with developmental problems (vision, speech, or hearing) were excluded.

Hollingshead's (1975) four factor index of social status (HI) which is widely used by researchers (e.g., Berkule-Silberman et al. 2010; Fernald, Marchman, and Weisleder 2013) was used to determine family SES. The HI is calculated by the weighted average of each parents' highest education level (scored from 1 = less than seventh grade to 7 = post-graduate degree) and occupational status (scored from 1 = labourer to 9 = executive manager). The HI social status scores range from 8 (lowest) to 66 (highest). Overall mean SES (N = 101) was 39.56; SD = 11.95; range = 14-62; median = 40.

Similar to Fernald et al.'s (2013) methodology, a median-split of HI was used to form two SES subgroups to explore the relationship between SES, emergent literacy, and home literacy. The median-split allowed a comparison of higher and lower SES families. Participants whose family SES scores were less than 40 were grouped as lower SES and scores that were 40 or above were grouped as higher SES. Of the 101 children, 49 (22 girls and 27 boys) were from lower SES families (SES score: M = 29.61; SD = 7.61; range = 14-39) and 52 (27 girls and 25 boys) were from higher SES families (SES score: M = 49.00; SD = 6.27; range = 40-62).

As can be seen in Table 1 the main cultural background of families was Australian with a greater percentage of higher SES parents (80.8%) married compared to lower SES families (66.7%). Clear differences between SES levels can be seen in Table 2 for parental education and occupation. A greater proportion of higher SES mothers held a university (20%) or post-graduate degree (22%) with only 4.4% of lower SES mothers obtaining a university degree. A similar pattern was found for fathers with 26.5% of higher SES fathers holding a degree or post-graduate degree (4.1%) with no lower SES fathers holding any university education. The mode occupation level for lower SES mothers was elementary

clerical sales and service workers (41.9%) compared with higher SES mothers with a mode occupation at professional level (33.3%). For lower SES fathers, the mode occupation was labourer (29.7%) and for higher SES fathers it was associate/para professional (36%).

Table 1

Marital Status and Parental Cultural Backgrounds for Lower and Higher SES Families (N = 101)

Demographic Factors	**Lower SES (%)**	**Higher SES (%)**
Marital Status		
Married or defacto	66.7	80.8
Divorced or Separated	16.7	5.8
Single or Never Married	16.6	13.4
Maternal Cultural Background		
Australian	79.2	60.8
New Zealand	10.3	17.5
Australian Aboriginal	0	5.9
European	4.2	3.9
Pacific Islands	4.2	5.9
Asian	0	0
U.K.	2.1	2.0
U.S.	0	2.0
South African	0	2.0
Paternal Cultural Background		
Australian	70.2	66.7
New Zealand	12.8	13.6
Australian Aboriginal	0	0
European	6.4	7.8
Pacific Islands	4.3	5.9
Asian	2.1	2.0
U.K.	2.1	2.0
U.S.	2.1	0.0
South African	0	2.0

Table 2

Parental Education and Occupation for Lower and Higher SES Families (N = 101)

Demographic Factors	Lower SES (%)	Higher SES (%)
Maternal Education		
Less than 7th grade	0	0
Junior high school (7th-9th grade)	0	2.0
Partial high school (10th -11th grade)	20.0	8.0
High school graduate (12th grade)	42.3	14.0
Partial college (at least 1 year) or specialised training (e.g., TAFE, Apprenticeship)	31.1	34.0
University degree (e.g., Bachelor)	4.4	20.0
Post-graduate degree	2.2	22.0
Paternal Education		
Less than 7th grade	0	0
Junior high school (7th-9th grade)	7.3	2.0
Partial high school (10th -11th grade)	36.6	4.1
High school graduate (12th grade)	19.5	14.3
Partial college (at least 1 year or specialised training (e.g., TAFE, Apprenticeship)	36.6	49.0
University degree (e.g., Bachelor)	0	26.5
Post-graduate degree	0	4.1
Maternal Occupation		
Labourer	3.2	0
Elementary clerical sales and service worker	41.9	2.4
Intermediate production and transport worker	3.2	0
Intermediate clerical, sales and office worker	25.8	14.4
Advanced clerical and service worker	6.5	7.1
Trades person	0	9.5
Associate/para professional	12.9	23.8
Professional	6.5	33.3
High level managers/executive	0	9.5
Paternal Occupation		
Labourer	29.7	4.0
Elementary clerical sales and service worker	16.2	2.0
Intermediate production and transport worker	16.2	2.0
Intermediate clerical, sales and office worker	5.5	4.0
Advanced clerical and service worker	0	2.0
Trades person	21.6	26.0
Associate/para professional	10.8	36.0
Professional	0	20.0
High level managers/executive	0	4.0

Measures

Print concepts

Children were asked 10 questions (e.g., first and last word on a page, where to start reading, left to right directionality, capital and lower case letter) from Clay's (2005) Concepts about Print test using the story book *Stones* (Clay, 2008). Cronbach's $\alpha = .75$.

Letter name and sound knowledge

As each upper case letter printed on individual cards were presented to children in random order, they were asked to provide the name and sound of each letter. Maximum score for letter name = 26 and letter sound = 26.

Name writing

Children were asked to write their name on a sheet of blank paper. A 7 point rating scale adapted from Bloodgood (1999) was used to score name writing (0 = no production, 1 = scribbling in a random fashion, 2 = controlled scribbling (e.g., lines, dots), 3 = random letter-like forms, 4 = non-phonetic strings of letters or first letter of name, 5 = some correct letters, 6 = name writing has most letters correct, 7 = name written correctly).

Home Literacy Questionnaire

Adapted from Sénéchal et al. (1998), the questionnaire asked about child (e.g., age, gender) and demographic factors (marital status and cultural background of parents, parental education and occupation). The home literacy questions asked about 1) *Home literacy resources*: number of story books owned, alphabet resources at home (e.g., alphabet chart/poster, magnetic letters, alphabet flash cards 2) *Story book reading*: In a typical week, how many hours is the child read a story book by an adult who lives with the child? Parents also indicated how frequently the child had a story book read to them at home. 3) *Parent literacy teaching*: Nine items asked how often in a typical week do parents teach their child:

about letter names, letter sounds, to read words in books, to write/copy letters, their name, and words, what signs or labels say, and letters and words in environmental print.

Parents responded to the 9 parent literacy teaching questions (max score = 54; Cronbach's $\alpha = .93$) and the frequency of story book reading (max score = 6) on a 6-point rating scale where 1 = never, 2 = occasionally, 3 = fortnightly, 4 = weekly, 5 = daily, 6 = several times daily.

Procedure

Approval for the research was provided by the university ethics committee and permission to conduct the study was granted by the managers of 11 preschools. Parental consent was gained from parents who then completed the home literacy questionnaire. In a quiet room at each child's preschool, children were assessed on print concepts, letter name and sound knowledge, and name writing by a trained researcher. Preschool staff members were not present in the quiet room during the assessments. Parents and children were free to withdraw their participation at any time.

Results

Across SES groups ($N = 101$) children performed better on letter names than letter sounds and had some knowledge of print concepts such as a word, and capital and lower case letter (see Table 3). Children were beginning to form strings of conventionally written letters or the first letter of their name. Table 3 also shows that much variation occurred in the number of story books owned with families owning on average 64 story books. The majority of parents reported reading daily (52.5%) or weekly (20.8%) to their child with 8.9% reading several times daily. Children had access to alphabet resources at home such as magnetic letters, alphabet posters, and flash cards.

Table 3

Overall Means, Standard Deviations, and Range for Preschoolers' Emergent Literacy Skills and Home Literacy (N = 101)

Measures	Mean	*SD*	Range
Emergent literacy skills			
Print concepts [a]	4.58	2.48	0-10
Letter name[b]	7.67	8.81	0-26
Letter sound[b]	3.48	6.26	0-24
Name writing[c]	3.47	2.18	0-7
Home literacy			
Story books owned	64.44	52.13	3-200
Story book reading duration[d]	2.95	2.00	0-12
Story book reading frequency[e]	4.38	1.20	1-6
Alphabet resources[f]	4.21	1.91	0-8
Parent literacy teaching[g]	30.43	9.90	9-48

Note. Maximum test score: [a] = 10, [b] = 26, [c] = 7, [d] = hours/week, [e] = 6, [f] = 8, [g] = 54

To determine overall associations between emergent literacy, home literacy measures, and SES, correlational analysis was conducted. Preliminary analysis showed that print concepts, name writing, alphabet resources, and parent literacy teaching were normally distributed. However, the distribution of letter name and sound knowledge, story books owned, story book reading duration, and story book reading frequency were skewed and required a log transformation to normalise the data. These variables were all normalised following transformation except frequency of story book reading which remained highly and negatively skewed and was therefore not included in any further analyses.

Age was partialled out because it was strongly correlated with all the emergent literacy measures (all p's <.01). After controlling for age Table 4 shows that SES was

positively related to all emergent literacy skills, home literacy resources, parent literacy teaching but not home story book reading. Emergent literacy skills were strongly correlated with each other.

Table 4

Correlations between SES, emergent literacy skills, and home literacy, with age partialled out (N = 101)

	1.	2.	3.	4.	5.	6.	7.	8.
1. SES								
2. Print concepts	.25*							
3. Letter name	.44**	.43**						
4. Letter sound	.41**	.60**	.71**					
5. Name writing	.37**	.35*	.51**	.47**				
6. Story books owned	.36**	.16	.29**	.35**	.35**			
7. Story book reading	.12	.00	.11	.16	.14	.24*		
8. Alphabet resources	.26**	.12	.33**	.19	.26**	.31**	.22*	
9. Parent literacy teaching	.31**	.14	.29**	.24*	.27**	.25*	.43**	.38**

*p<.05; **p<.01

Comparative findings between SES groups

Table 5 shows the comparative scores of emergent literacy and home literacy measures for higher SES and lower SES groups. Higher SES children performed significantly better than lower SES children on emergent literacy skills (print concepts, letter name and sound knowledge, and name writing). Higher SES children also had greater access to alphabet resources (e.g., alphabet puzzles, games, and posters) and story books. Furthermore, higher SES parents reported teaching their child about letters and words more frequently (daily) than lower SES parents (weekly). No significant differences were found between higher and lower SES groups on home story book reading with parents of both SES groups reporting to spend a similar amount of time reading story books to their child (approximately 3 hours per week).

Table 5

Mean (Standard Deviation, Range) and T-tests for Lower SES (N = 49) and Higher SES (N = 52) Groups

Measure	SES		*T-tests* [g]		
	Lower SES	Higher SES	*t* [g]	*p*	*d*
Emergent Literacy Skills					
Print concepts [a]	3.96 (1.93, 0-9)	5.17 (2.79, 0-10)	2.53	.013*	0.51
Letter name[b]	5.06 (7.48, 0-26)	10.13 (9.31, 0-26)	3.13	.002**	0.63
Letter sound[b]	1.82 (4.55, 0-21)	5.04 (7.22, 0-24)	3.06	.003**	0.62
Name writing[c]	2.94 (2.10, 0-7)	3.96 (2.17, 0-7)	2.41	.018*	0.48
Home literacy					
Story books owned	57.35 (53.97, 3-200)	71.12 (49.93, 10-200)	2.32	.022*	0.47
Story book reading [d]	2.83 (2.16, 0-12)	3.07 (2.31, 0.5-10)	0.60	.550	0.12
Alphabet resources [e]	3.82 (2.03, 0-8)	4.58 (1.73, 1-8)	2.03	.045*	0.41
Parent literacy teaching [f]	28.02 (10.27, 9-45)	32.74 (9.05, 12-48)	2.44	.017*	0.49

Note. Maximum test score: [a] = 10, [b] = 26, [c] = 7, [d] = hours/week; [e] = 8, [f] = 54; [g] = all t-tests based on dfs = 99.

Discussion

The present study explored where emergent literacy and home literacy differences exist between lower SES and higher SES Australian preschoolers. The findings aimed to help inform policy on narrowing the literacy gap in the early years. In line with international research (e.g., Aram et al. 2013; Arnold and Doctoroff 2003; **Kluczniok et al. 2013**; Korat 2005) the present study found that lower SES Australian children had poorer emergent literacy skills and less access to story books and alphabet resources at home. Lower SES and higher SES parents reported spending similar amounts of time per week reading to their

child. However, lower SES parents reported teaching their child about letters and words less frequently than higher SES parents. **Although speculative, these findings suggest a possible mismatch between policy initiatives which seek to promote parent-child reading (e.g., Australian Government, 2005) and growth of print-based skills.** It is possible that government home reading programs are having a positive impact on parent-child reading but this may not be providing all the desired literacy outcomes upon school entry for lower SES children.

The lack of difference found between SES groups on parent-child story book reading contrasts with previous research that has shown higher SES parents reading significantly more to their children than lower SES parents (e.g., Adams 1990; Let's Read 2004; Whitehurst and Lonigan 1998). One possible explanation for this disparity is that over recent decades, government programs in Australia have encouraged parents across low SES communities to read books to their children daily which may be positively impacting upon parent-child reading. For example, the "Let's Read Community Program" (2012) has been delivered across seven Australian states and 104 communities engaging over 200,000 children and their families. The "Book Start Program" (Let's Read 2004) provides new parents with a kit containing free story books, book lists, and parental guidance on shared story book reading. It is promising that due to the heightened focus on shared book reading that parents are getting the message that reading books to your child is important.

However, although book reading supports the development of oral language, vocabulary, and reading comprehension research has shown that preschool children's home reading experiences may not be fostering early print-based skills such as letter knowledge that are strong predictors of conventional reading (Hood, Conlon, and Andrews 2008; Sénéchal 2006). For example, Hood et al.'s (2008) study with Australian preschoolers (N = 143) showed that parent-child story book reading was not related to preschool letter

identification or children's later reading in Grade 1 and 2. A longitudinal study with French Canadian families (N = 90) that followed children from kindergarten to Grade 4 showed parent-child book reading not to be related to letter name and sound skills but rather predicted vocabulary and comprehension skills (Sénéchal 2006). Therefore, reading storybooks to young children may not be the most effective home literacy activity to foster print-based skills that are critical precursors of beginning reading and writing.

Another finding of the present study revealed that parent literacy teaching differed significantly between lower SES and higher SES families. Higher SES parents reported teaching their children more frequently about letter names, sounds, and words during home literacy activities such as writing and interacting with environmental print than lower SES parents. This finding, in light of the evidence showing that story book reading promotes language skills whereas parent print teaching fosters print-based skills (Hood et al. 2008; Sénéchal and LeFevre 2002; Sénéchal 2006) is important to consider when planning to assist lower SES families. One approach for enhancing literacy skills in lower SES children may be coaching parents in using effective print-based strategies on a regular basis **that help scaffold** child learning in the home (Korat 2009; Lynch 2009).

Therefore, in addition to encouraging story book reading, policy makers need to also focus on promoting effective print-based strategies. Family programs do currently exist in Australian communities to support low SES families however, their main emphasis is on general parenting skills, language development, and story book reading (e.g., SHELLS and HIPPY; Let's Read 2004). Providing low SES Australian families with effective strategies that scaffold learning of alphabet knowledge, print concepts, and emergent writing may help narrow the emergent literacy gap between lower and higher SES preschoolers. **For example, parents can play an important role in scaffolding their children's early writing development by providing writing materials and opportunities to use them, giving**

feedback about writing attempts, and extending and clarifying writing interactions (Aram and Levin, 2001; 2002). Encouraging parents to use scaffolding strategies may help foster emergent writing skills at home. These strategies may include the parent holding and leading the child's hand to write the words, writing a word and encouraging the child to copy it, providing the names and sounds of letters for the child to write the word, and encouraging the child to retrieve the correct phoneme (Aram and Levin, 2002; Neumann, Hood, and Ford, 2012).

Another example of a promising home print-based strategy to scaffold literacy learning is the organised parent referencing of letters and words to young children through ubiquitous and freely available environmental print on a daily basis (e.g., food labels on packaging, road signs; Neumann et al. 2009). It has been shown that low SES families have high levels of exposure to environmental print in their communities (e.g., Lynch 2009; Neuman and Celano 2001). Guiding low SES parents in pointing out environmental print words and letters to their children using multisensory strategies (e.g., pointing to the letter and saying its name, moving a hand in the shape of the letter, and tracing letters and words with a finger; Neumann, Hood, and Ford 2013) may be a potential way of engaging families in low-cost and meaningful literacy activities that foster letter skills. This approach aligns with the *Early Years Learning Framework and Australian Curriculum* (Connor 2011) where young children are encouraged to engage with and gain meaning from print in context.

Overall, it is clear that young children from disadvantaged homes with low SES and parental education are at greater risk of developing reading and writing difficulties (Australian Government, 2009). In addition to story book reading, policy makers need to offer low SES parents a wider range of home literacy strategies and recommendations to scaffold reading and writing development in the preschool years.

This approach may help narrow the literacy gap providing children from low SES backgrounds stronger emergent literacy skills upon school entry.

Study limitations

The present research was based on parent reports of home literacy activities and resources which can be prone to social-desirability bias (e.g., Haney and Hill, 2004; Kluczniok et al. 2013; Umek et al. 2005). For example, studies have shown that parents may have difficulty interpreting questions or may over- or underestimate the frequency and duration of literacy activities at home resulting in an inaccurate measure of parent-child behaviours (Currenton & Justice, 2008; Farver et al., 2006). Observational methods where researchers measure the observed frequency and range of print interactions in the homes of families (e.g., Purcell-gates, 1996) in combination with parent questionnaires may be more reliable. In addition, as the design of the present study was correlative, causation cannot be implied. Therefore, empirical studies are needed to investigate the effects of print focussed programs in low SES families. The small participant sample limits the generalizability of the findings to other communities. Future research that collects demographic, home, and emergent literacy data from a wider range of low SES communities (e.g., rural, remote, Indigenous) will help guide the planning of family literacy programs.

Conclusion

This study confirms that lower SES children in this Australian sample are trailing behind their higher SES peers in emergent literacy abilities and possess fewer home literacy resources. In addition, although lower SES parents are reading story books to their children they are not engaging in print teaching activities as frequently as higher SES parents. To address this difference it is recommended that Australian policy makers provide lower SES

families with early literacy programs that encourage daily engagement in literacy activities that focus on promoting knowledge about print.

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