Parental factors related to children's reading: Evidence from comparing transnational marriage families and local families

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Abstract

The purpose of this study was to determine the parental factors related to children's reading by comparing two types of families, transnational marriage families in which the mother was not born in Taiwan and local families. Data for this study came from the PIRLS 2006. There were 273 children from transnational marriage families. Children's gender, mother's education level and well-off condition of families were all identical. The study selected 273 children from local families who were the classmates of the children from transnational marriage families. To control the economic effect, this study further selected the "average" well-off condition of families. A total of 179 children (102 girls and 87 boys) from transnational marriage families and 214 children (112 girls and 92 goys) from local families were analyzed by using The Learning to Read Survey. Results revealed that children of transnational marriage families did not have good reading achievement when comparing to children from local families. However, the efforts of parents from two types of families on children's reading were not different. Nevertheless, mother's education plays an essential role on children's reading. This phenomenon is discussed in the paper.

Keywords: *transnational marriage family, parental factors related children's reading*

Introduction

Parents play a critical role in the literacy development of their children (Baker, 2003). It is now well established that parents are associated with children's reading achievement (Fitton & Gredler, 1996; Kush, Watkins, & Brookhart, 2005; Lee & Barro, 1998; Olofson & Niedersoe, 1999; Sonnenschein, Brody, & Munsterman, 1996; Weinberger, 1996). Parents involvement, parent's reading attitudes and behaviors, parental beliefs and family SES (socioeconomic status) are frequently mentioned as parental factors related to children's reading (e.g. Arnold, Zeljo, Doctoroff, & Ortiz, 2008; Baker, Serpell, & Sonnenschein, 1995; Begum, 2007; Considine & Zappala, 2002; Lee & Barro, 1998; Rowe, 1991).

Parents' involvement referred to the number of contacts with children, quality of interactions, participation in children's school activities, and home activities (Izzo, Weissberg, Kasprow, & Fendrich, 1999). In this study, parents' involvement in home literacy activities was

the main concern. The home literacy activities are to take child to the library, play games to teach child new things, read to child, share reading, and to provide reading materials. Research has showed that reading enrichment activity at home had significant positive influences on students' reading achievement (Begum, 2007; Lynch, Anderson, Anderson, & Shapiro, 2006; Purcell-Gates, 1995; Roberts, Jurgens, & Burchinal, 2005; Rowe, 1991). Greater parents' involvement was associated with stronger preliteracy skills and literacy experiences during the preschool years were associated with subsequent reading achievement (Arnold, et al., 2008; Neuman & Dickinson, 2001).

Parent's reading attitudes and behaviors are also related to children's reading achievement (Greaney & Hegarty, 1987; Lynch, et al., 2006; Stoughton, 1984). Stoughton (1984) explored the relationship between grade 4 children's reading and parental behaviors and attitudes and found parental behaviors and attitudes were linearly predictive of children's reading achievement.

Parental beliefs about literacy are not only an important key to understanding the variety of activities in which parents engage with their young children (Lynch, et al., 2006) but also in relation to preschool children's language and literacy competencies (Bennett, Weigel, & Martin, 2002). Mothers who believed that reading is enjoyable read more frequently to their children and conversed more with them during shared reading. The children of mothers holding these beliefs showed greater interest in reading (DeBaryshe, 1995).

Family SES is also associated with parents' education and family income (Arnold, et al., 2008). Family SES influences children's reading achievement (Begum, 2007) and SES was positively related to parents' involvement (Arnold, et al., 2008; DeBaryshe, 1992).

Moreover, level of parental education is a determining factor in children's reading abilities and achievement (Baker et al., 1995; Considine & Zappala, 2002; Lee & Barro, 1998; Magnuson, 2007; Westerlund & Lagerberg, 2008). Considine and Zappala (2002) confirmed the relationship between parental education and children's literacy outcomes. Parents with higher schooling placed greater value on education and thus provided more materials and school-related activities for their children (Baker et al., 1995). Some researches further investigated the influence of maternal education. Marks (2008) compared the influence of father's and mother's socioeconomic characteristics on student performance by analyzing the data from the OECD's 2000 Program for International Student Assessment (PISA) study that examined student achievement in reading, mathematics and science. He found that in a larger number of countries the effects of mother's education on reading are stronger than that of father's education.

Mothers' education is related to their beliefs about reading (Lynch, et al., 2006), and then their beliefs are associated with the children's home reading activities (Baker, et al., 1995). Weigel, Martin, and Bennett (2006) found that maternal education level significantly predicted

literacy belief, and facilitative mothers were more likely to have higher education levels. Higher-educated mothers are more likely to believe that reading is enjoyable (DeBaryshe, 1995). Children of college-educated mothers were read to more often, watched less television, participated more in structured activities, and had mothers who were more involved in their schooling when compared with children of less educated mothers (Raley, 2007). But, Magnuson (2007) has suggested that the children's reading achievement would improve when their young and less educated mothers (below college) completed additional 1.5 years of education. And these effects persisted through age 12 of children. In conclusion, there are several parental factors having influence on children's reading. Among all, mother plays an essential role in her child's reading.

Recently, the number of transnational marriage families with non-native mothers in Taiwan has increased significantly, from 8% to 15% of all population (Department of Statistics, R. O. C., 2008). Due to these non-native mothers from different cultures and background, many people in Taiwan show biased belief that these mothers cannot provide their children with good fostering and their children's physical or psychological development will be lag behind local children. The study aimed to seek if the bias be verified by examining the difference of reading achievement between children from transnational marriage families and local families with native mothers, and to explore the parental factors related to children's reading. In sum, the purpose of the study was to see if there were differences of the parental factors related to children's reading by comparing two types of families, transnational marriage families in which the mother was not born in Taiwan and local families. Because mothers' education is an effective factor on children's reading, it would be controlled to demonstrate the importance of parents' reading attitudes, reading behaviors and involvement on children's reading.

Method

Participants

Data for this study came from the PIRLS 2006. Exclusion of participants (either students or parents) who were absent and did not complete the questionnaires resulted in 4,589 pairs of Grade 4 children (2184 girls and 2401 boys) and their parents from 150 elementary schools in Taiwan. Among all the students, there were 273 children (143 girls and 130 boys) from transnational marriage families. By identical children's gender, similar mother's education level and well-off condition of families, the study selected 273 children from local families who were at the same class as the children from transnational marriage families. Demographic information for each family is presented in Table 1.

In order to determine the parental factors related to children's reading by comparing two types of families under controlling the effect of economic factors, this study further selected the

well-off condition of each family on "average" level. So, the data of 179 children (102 girls and 87 boys) from transnational marriage families and 214 children (112 girls and 92 goys) from local families were analyzed in this study.

[Take in Table 1 about here]

Measures

1. Children's Reading Achievement

The PIRLS 2006 achievement booklets were designed to assess children's ability to comprehend text via comprehension questions. Each child responded to the assessment and received his reading achievement scores.

2.Parental Factors: PIRLS Questionnaire for Parents

The PIRLS Learning to Read Survey was adopted and used for this study. The survey investigated child–parent literacy interactions, home literacy resources, parents' reading habits and attitudes, and home–school connections.

The items of "early literacy experiences at home" and "literacy activities with children more recently" were about child–parent literacy interactions. The item numbers were 2a–2j and 8a–8f. The items about "early literacy experiences at home" were rated on a three-point Likert-type scale in which the answers ranged from 1 (never or almost never) to 3 (often). The items of "literacy activities with children more recently" were rated on a four-point Likert-type scale in which the answers ranged from 1 (never or almost never) to 4 (every day or almost every day).

Two exploratory factor analyses were performed to identify the items of "early literacy experiences at home" and "literacy activities with children more recently" respectively. Based on the data from 4,589 parents of Grade 4 children, two principle components extraction with an oblique rotation were used.

On "early literacy experiences at home", two factors with eigenvalues larger than 1.00 were yielded; these accounted for 51.16% of the total variance. As shown in Table 2, Factor 1 was about "*early literacy activities*". It describes parents' efforts to engage their young children in literacy activities to foster literacy development. Factor 2, named "*talking to young children,*" concerned the frequency of talking to young children about reading or something else.

As to "literacy activities with children more recently", the estimation yielded one factor with eigenvalues larger than 1.00; these accounted for 51.37% of the total variance (see Table 3). This

factor, which covered "*recent literacy activities,*" includes the frequency of parents engage in reading activities with their children.

The numbers of books and children's books at home were related to home literacy resources. There were five-point and six-point Likert-type scales ranging from 1 (the least) to 5 or 6 (the most).

To identify the items relating to parental reading behaviors and attitudes factors, an exploratory factor analysis was also performed. A principle components extraction with an oblique rotation was used. Seven items relevant to parental factors emerged. The item numbers were 12, 13, and 14a–14e. The estimation yielded three factors with eigenvalues larger than 1.00; these accounted for 74.53% of the total variance (see Table 4).

As shown in Table 4, Factor 1 tapped "parents' attitudes towards reading". It showed the extent to which parents enjoy reading. Factor 2, named "evaluation of reading", concerned parents who see reading as a tool to get information only. Factor 3 was mainly loaded by items designed to tap "parents' reading behaviors", that was, the frequency of reading activities.

All indicators constituted to the three factor items were rated on a four-point Likert-type scale in which the answers ranged from 1 (never or almost never, disagree a lot) to 4 (every day or almost every day, agree a lot).

[Take in Table 2, 3 and 4 about here]

Results

According to family type and mother's education, four groups were divided: local families and mothers below high school, local families and mothers above high school (including high school), transnational marriage families and mothers below high school, and transnational marriage families and mothers above high school. Table 5 provides the descriptive statistics for children's reading achievement, parental reading attitudes and behaviors, early literacy experience at home, literacy activities with children more recently, and the number of book and children's book at home.

Children's reading achievement

According to the literature, children's gender had significant influences on reading (Diamond & Onwuegbuzie, 2001; Rowe, 1991), children's gender was incorporated into analysis. A 2(children's gender)×2(family type)×2 (mother's education) three-way ANOVA was conducted. The results revealed no main effect of children's gender. There was a significant effect of family type, F (1, 371) = 20.89, p <.001, η^2 = .05. Children of local families had better reading

achievement than children of transnational marriage families did. There was also a significant main effect of mother's education, F (1, 371) = 22.76, p <.001, η^2 = .06. Children of mothers above high school had better reading achievement than children of mothers below high school did. The interactions between gender and family type, mother's education and family type, and gender, family type and mother's education were not significant. However, the interaction between gender and mother's education was significant, F (1, 371) = 5.06, p <.05, η^2 = .01. *Scheffé* post hoc test found that girls of mothers above high school had the best reading achievement among all.

Parental reading behaviors and attitudes

A 2 (family type)×2 (mother's education) two-way ANOVA was examined parents' reading attitudes. The results showed that there was a significant main effect of mother's education, F (1, 367) = 9.72, p <.01, η^2 = .03. Mothers above high school had more positive attitudes toward reading. The family type effect and interaction between both were not significant. Similarly, a 2 (family type)×2 (mother's education) two-way ANOVA was to examine parents' reading behaviors. There was a significant mother's education effect, F (1, 372) = 33.95, p <.001, η^2 = .08. When mother's education was above high school, parents had more reading behaviors. The main effect of family type and interaction between both were not significant. As to parents' evaluation of reading, a 2 (family type)×2 (mother's education) two-way ANOVA was conducted. There were no main and interaction effects. It indicates parents of all background value reading very much the same.

Early literacy experience at home

A 2 (family type)×2 (mother's education) two-way ANOVA was conducted. There was a significant mother's education effect on early literacy activities, F (1, 372) = 25.46, p <.001, η^2 = .06, there were more early literacy activities found in the families of mothers with higher education. There was no main effect of family type or interaction.

A 2 (family type)×2 (mother's education) two-way ANOVA was to examine the behavior of talking to young children. It showed a significant main effect of mother's education, F (1, 364) = 4.85, p <.05, η^2 = .01, mothers with higher education more frequently talked to their young children. There was no main effect of family type or interaction.

Recent literacy activities with children

A two-way ANOVA was examined in order to ascertain the family type and mother's education effects on the recent literacy activities. It revealed a significant main effect of mother's education, F (1, 373) = 18.15, p <.001, η^2 = .05, mothers with higher education more frequently involved in home literacy activities recently. There was no main effect of family type or interaction.

Home literacy resources

A two-way ANOVA was examined the family type and mother's education effects on the number of books at home. There was a significant main effect of mother's education, F (1, 370) = 56.19, p <.001, η^2 = .13, mothers with higher education had more books at home. There was no other main effect or interaction. Similar result was found on the number of children books at home. By 2 (family type)×2 (mother's education) two-way ANOVA, there was a significant main effect of mother's education, F (1, 375) = 64.01, p <.001, η^2 = .15, mothers with higher education had more children books at home. And there was no other main effect or interaction.

[Take in Table 5 about here]

Discussion

The purpose of the study was to investigate the parental factors related to children's reading by comparing two types of families, transnational marriage families in which the mother was not born in Taiwan and local families. Since mothers' education is an effective factor on children's reading, after controlling the level of mothers' education, the results showed on the same well-off level, children from transnational marriage families did not have good reading achievement as children from local families. However, analysis of the parental factor related children's reading by means of comparing two types of families revealed that there were no differences between transnational marriage families and local ones. It means that mothers of all families put similar efforts into building their children's reading abilities. Moreover, as other studies have indicated, mother's education played an essential role on children's reading.

In sum, there is no family type effect on parental factors related to children's reading. The viewpoint carried by society that non-native mothers cannot provide their children with good fostering in children's literacy development is proved a bias. In line with the parents from local families, parents from transnational marriage families have positive reading attitudes and behaviors. They involve in many literacy activities with their children, and provide books for their children. Parents' efforts on children's reading are relatively sufficient regardless the reading achievement of children from transnational marriage families is not as good as children from local families. Why similar parenting efforts lead to different reading performance? There might be other factors involving in the reading achievement of children from transnational marriage families. It requires further investigation.

Again, this study confirms that the mother's education is an essential factor on children's reading. Mother's education is related with reading attitudes and behaviors, children's early literacy experience at home, recent literacy activities with children, and home literacy resources. Mothers above high school (including high school) have more positive reading attitudes and

frequently read at home. They also took part in their children's reading activities since their children were young. With early and recent literacy experience, children have better reading achievements.

Researchers in this study further explored that at what level of mother's education completed shows enhancing power on children's reading. Several one way ANOVA were examined the level of mother's education on children's reading and parental factors. Table 6 provides the results of families under average well-off condition. There were no significant mother's education effects on evaluation of reading and talking to young children. But mother's education significantly affected other factors as *Scheffé* post hoc tests shown in Table 7. In conclusion, high school is the critical level of mothers' education on fostering children's literacy development. Once the mothers complete high school, they would begin to have more reading behaviors and buy more books for their children than mothers whose education below high school level. As education level goes up, mothers with university or college education involve more in their children's literacy activities. Although we do not know what makes high school mothers possess these stimulating traits, it might be beneficial to encourage mothers to have additional education as Magnuson (2007) suggested.

References

Arnold, D. H., Zeljo, A., Doctoroff, G. L., & Ortiz, C. (2008). Parent involvement in preschool: Predictors and the relation of involvement to preliteracy development. *School Psychology Review*, *37*, 74-90.

Baker, L. (2003). The role of parents in motivating struggling readers. *Reading and Writing Quarterly*, *19*, 87–106.

Baker, L., Serpell, R., & Sonnenschein, S. (1995). Opportunities for literacy learning in the homes of urban preschoolers. In L. M. Morrow (Eds.), *Family literacy: Connections in schools and communities* (pp. 236-252). Newark, DE: International Reading Association.

Begum, N. N. (Ed.). (2007). *Effect of parent involvement on math and reading achievement of young children: Evidence from the Early Childhood Longitudinal Study*. Indiana University of Pennsylvania.

Bennett, K. K., Weigel, D. J., & Martin, S. (2002). Children's acquisition of early literacy skills: Examining family contributions. *Early Childhood Research Quarterly*, *17*, 295-317.

Considine, G., & Zappala, C. (2002). The influence of social and economic disadvantage in the academic performance of school students in Australia. *Journal of Sociology*, *38*, 129-148.

DeBaryshe, B. D. (1992). *Early language and literacy activities in the home*. Greensboro, NC: North Carolina University.

DeBaryshe, B. D. (1995). Maternal belief systems: Linchpin in the home reading process. *Journal of Applied Developmental Psychology*, *16*, 1–20.

Department of Statistics, R.O. C. (2008). Ministry of the Interior, R. O. C., Taiwan. http://www.ris.gov.tw/version96/stpeqr00.html

Diamond, P. J., & Onwuegbuzie, A. J. (2001). Factors associated with reading achievement and attitudes among elementary school-aged students. *Research in the School, 8,* 1–11.

Fitton, L., & Gredler, G. (1996). Parental involvement in reading remediation with young children. *Psychology in the Schools, 33,* 325–332.

Greaney, V., & Hegarty, M. (1987). Correlates of leisure-time reading. *Journal of Research in Reading, 10,* 3–27.

Izzo, C. V., Weissberg, R. P., Kasprow, W. J., & Fendrich, M. (1999). A longitudinal assessment of teacher perceptions of parent involvement in children's education and school performance. *American Journal of Community Psychology, 27,* 817-839.

Kush, J. C., Watkins, M. W., & Brookhart, S. M. (2005). The temporal-interactive influence of reading achievement and reading attitude. *Educational Research and Evaluation, 11*(1), 29–44.

Lee, J. W., & Barro, R. J. (1998). *Schooling quality in a cross section of countries* (Development Discussion Paper No. 659). Harvard, MA: Harvard Institute for International Development, Harvard University.

Lynch, J., Anderson, J., Anderson, A., & Shapiro, J. (2006). Parents' beliefs about young children's literacy development and parents' literacy behaviors. *Reading Psychology, 27,* 1-20.

Magnuson, K. (2007). Maternal education and children's academic achievement during middle childhood. *Developmental Psychology, 43,* 1497–1512.

Marks, G. N. (2008). Are father's or mother's socioeconomic characteristics more important influences on student performance? Recent international evidence. *Social Indicators Research, 85,* 293-309.

Neuman, S., & Dickinson, D. (Eds.), (2001). *Handbook of early literacy research.* New York: Guilford Press.

Olofson, A. & Niedersoe, J. (1999). Early language development and kindergarten phonological awareness as predictors of reading problems: From 3 to 11 years of age. *Journal of Learning Disabilities, 32,* 464-472.

Purcell-Gates, V. (1995). *Other people's words: The cycle of low literacy.* Cambridge, MA: Harvard University Press.

Raley, S. (2007). *Transmitting advantage: Maternal education differences in parental investment activities.* Unpublished doctoral dissertation. University of Maryland, College Park.

Roberts, J., Jurgens, J., & Burchinal, M. (2005). The role of home literacy practices in preschool children's language and emergent literacy skills. *Journal of Speech, Language, and Hearing Research, 48,* 345–359.

Rowe, K. J. (1991). The influence of reading activity at home on students' attitudes towards reading, classroom attentiveness and reading achievement: An application of structural equation modeling. *British Journal of Educational Psychology, 61,* 19-35.

Sonnenschein, S., Brody, G., & Munsterman, K. (1996). The influence of family beliefs and practices on children's early reading development. In L. Baker, P. Afflerbach, & D. Reinking (Eds.), *Developing engaged readers in school and home communities* (pp. 3–20). Mahwah, NJ: Lawrence Erlbaum.

Stoughton, C. K. (1984). The relationship between children's academic achievement and their perception of parental behaviors and susceptibility to parental influence. Unpublished doctoral dissertation. Boston College.

Weigel, D. J., Martin, S. S., & Bennett, K. K. (2006). Mothers' literacy beliefs: Connections with the home literacy environment and pre-school children's literacy development. *Journal of Early Childhood Literacy, 6*(2), 191–211.

Weinberger, J. (1996). A longitudinal study of children's early literacy experiences at home and later literacy development at home and school. *Journal of Research in Reading, 19,* 14–24.

Westerlund, M, & Lagerberg, D. (2008). Expressive vocabulary in 18-month-old children in relation to demographic factors, mother and child characteristics, communication style and shared reading. *Child Care Health Development, 34,* 257–266.

Table 1: Gender, Mother's education level, and Well-off condition by Family Population

Item	Families Type			
	Local Family		Transnational Marriage Family	
	N	%	N	%
Children's gender				
Male	130	48%	130	48%
Female	143	52%	143	52%
Mother's education level				
Did not complete the junior high school	13	5%	27	10%
Junior high school graduate	66	24%	63	23%
High school or vocational high school graduate	122	45%	102	37%
The college for professional training; a junior college graduate	33	12%	21	8%
General university or college graduate	25	9%	30	11%
Research institute graduate or higher	6	2%	6	2%
Well-off condition				
Very well-off	17	6%	31	11%
Somewhat well-off	20	7%	34	12%
Average	214	78%	179	66%
Not very well-off	16	6%	13	5%
Not at all well-off	2	1%	6	2%

Table 2: Oblique Rotated Two-Factor Solution of the Structure of Early Literacy Experience at Home, and the Items of Each Factor

Item	Factor	
	1	2
Early literacy activities		
2a. Read books	.65	
2b. Tell stories	.74	
2c. Sing songs	.56	
2d. Play with alphabet toys	.63	
2j. Go to the library	.55	
Talking to young children		
2e. Talk about what you do		.81
2f. Talk about what you read		.86
Eigenvalue	2.56	2.05
% of variance	25.63	20.53

Note: Factor loadings of a magnitude less than .50 are omitted.

Table 3: Oblique Rotated One-Factor Solution of the Structure of Literacy Activities with Children More Recently, and the Items of Each Factor

Item	Factor
	1
Recent literacy activities	
8a. Listen to my child read aloud	.70
8b. Talk with my child about what we do recently	.70
8c. Talk with my child about what he/she is reading on his/her own	.80
8d. Discuss my child's classroom reading work with him/her	.79
8e. Go to the library or a bookstore with my child	.60
8f. Help my child with reading for school	.68
Eigenvalue	3.08
% of variance	51.37

Note: Factor loadings of a magnitude less than .50 are omitted.

Table 4: Oblique Rotated Three-Factor Solution of the Structure of Parental Reading Behaviors and Attitudes, and the Items of Each Factor

Item	Factor		
	1	2	3
Reading behaviors			
12. When you are at home, how often do you read?			.87
13. When you are at home, how often do you read for enjoyment?			.81
Evaluation of reading			
14a. I read only if I have to		.89	
14d. I read only if I need information		.90	
Parents' reading attitudes			
14b. I like talking about books with other people	.83		
14c. I like to spend my spare time reading	.79		
14e. Reading is an important activity in my home	.76		
Eigenvalue	2.00	1.67	1.55
% of variance	28.58	23.82	22.13

Note: Factor loadings of a magnitude less than .50 are omitted.

Table 5: Means and standard deviations of the children's reading achievement and parents' factors

Family type & Mother's education / *Variables*	**Local family**				**Transnational marriage family**			
	Below high school		Above high school		Below high school		Above high school	
	N =58		*N* =152		*N* =56		*N* =113	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Children's Reading Achievement	524.86	51.96	554.49	48.18	494.47	68.17	526.82	65.75
Parental attitudes and behaviors								
Parents' reading attitudes	3.08	.86	3.30	.54	3.10	.47	3.29	.50
Evaluation of reading	2.43	.90	2.66	.88	2.49	.86	2.42	.83
Reading behaviors	2.36	.78	2.83	.74	2.29	.71	2.81	.81
Early literacy experience at home								
Early literacy activities	1.87	.45	2.05	.38	1.77	.45	2.08	.46
Talking to young children	2.09	.56	2.25	.52	2.00	.62	2.14	.63
Literacy activities with children more recently								
Recent literacy activities	2.52	.63	2.77	.56	2.39	.76	2.74	.61
Home literacy resources								
The number of book at home	2.42	1.08	3.17	1.13	2.04	1.04	3.27	1.31
The number of children book at home	2.41	1.20	3.38	1.28	2.07	1.13	3.93	1.35

Table 6: Mother's education level on children's reading achievement and parents' factors under average well-off condition

Mother's education level / *Variables*	Below junior high school	Junior high school graduate	High school graduate	Junior college	University	Research institute graduate or higher
	N=22	*N*=92	*N*=176	*N*=38	*N*=41	*N*=10
Children's Reading Achievement	490.65	514.30	533.98	550.05	567.99	564.28
Parental attitudes and behaviors						
Parents' reading attitudes	2.89	3.14	3.24	3.32	3.50	3.40
Evaluation of reading	2.30	2.49	2.48	2.51	2.82	3.05
Reading behaviors	2.05	2.39	2.67	2.88	3.25	3.65
Early literacy experience at home						
Early literacy activities	1.78	1.83	2.01	2.04	2.27	2.12
Talking to young children	1.95	2.07	2.18	2.27	2.22	2.25
Literacy activities with children more recently						
Recent literacy activities	2.34	2.49	2.70	2.72	2.96	2.97
Home literacy resources						
The number of book at home	1.95	2.30	2.94	3.39	3.93	4.40
The number of children book at home	1.82	2.35	3.13	3.61	4.00	4.50

Table 7: The results of *Scheffé* post hoc tests of mother's education level on children's reading achievement and parents' factors under average well-off condition

Variables \ *Mother's education level*	Below junior high school 1	Junior high school graduate 2	High school graduate 3	Junior College 4	University 5	Research institute graduate or higher 6
Children's Reading Achievement			>1(*p*=.069)	>1*	>1*** >2*** >3*	>1(*p*=.060)
Parental attitudes and behaviors						
Parents' reading attitudes					>1**	
Evaluation of reading						
Reading behaviors			>1*	>1** >2*	>1*** >2*** >3**	>1*** >2*** >3**
Early literacy experience at home						
Early literacy activities					>1** >2*** >3*	
Talking to young children						
Literacy activities with children more recently						
Recent literacy activities					>1* >2**	
Home literacy resources						
The number of book at home			>1* >2**	>1*** >2***	>1*** >2*** >3***	>1*** >2*** >3***
The number of children book at home			>1*** >2***	>1*** >2***	>1*** >2*** >3**	>1*** >2*** >3**

Note: **p* < .05. ***p* < .01. ****p* < .001