

The Relationship Between Aspects of Socio-Economic Factors and Academic Achievement

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ABSTRACT

This study focused on two aspects of family socio-economy, that is, mother's and father's educational level and reading materials in the home. Four-hundred thirty form five students from three secondary schools in a district in Kedah were involved in this case study. The findings of this study support previous studies where both parents' level of education and reading materials available in the home were related to children's academic achievement. Findings are discussed and suggestions for further study are forwarded.

ABSTRAK

Kajian ini mengfokuskan kepada dua aspek sosioekonomi keluarga iaitu pendidikan ibu dan bapa dan sumber pembelajaran di rumah. Seramai 430 pelajar tingkatan lima dari tiga buah sekolah menengah di sebuah daerah di Kedah dipilih sebagai responden kajian kes ini. Dapatan kajian ini menyokong kajian lepas yang menunjukkan bahawa tahap pendidikan ibu bapa dan sumber bacaan di rumah mempunyai perhubungan dengan pencapaian akademik anak-anak. Dapatan kajian dibincang dan cadangan kajian lanjutan disarankan.

INTRODUCTION

Parents' educational level could play an important role in determining a child's intellectual performance. It is believed that parents' educational level may perhaps be the main source of influence that determined a child's academic achievement (Plomin, Defries & McClearn 1990). Studies have indicated that parents with higher educational level could motivate the intellectual potential within children that may lead them to perform better in school and in return strive for further education (Haveman & Wolfe 1995). For example, parents' educational level may foster higher parental involvement in adolescents' school achievement (Benbow & Arjmand 1990; Bogenschneider & Small 1997; Patrikakou 1997), which in turn may influence high school completion (Astone & McLanahan 1991; Haveman, Wolfe & Spaulding 1991; Sandefur, McLanahan & Wojtkiewicz 1992). Educated parents were also found to be able to make constructive deci-

sions, such as how much time to spend with their children, and then, given their income, may decide how much income to devote to their children's education (Haveman & Wolfe 1995).

In terms of gender, each parent may have a different influence on the adolescents' academic outcome. Fathers' educational level was significantly related to adolescents' likelihood of attending university (Marjoribanks 1998). Even though fathers' educational level had shown to have a considerable impact on children's education, "research has suggested mother's educational level is a more potent predictor of a child's achievement than father's educational level" (Milne 1989). Mothers' educational level were found to be significantly related to children's performance in school compared to children whose mothers were less educated (Garasky 1995) and this was also a predictor of high school juniors' achievement test score (Otto & Atkinson 1997). On the other hand, less educated mothers were identified as possessing less enthusiasm in their adolescent's learning (Portes & Zady 1998).

Most studies on parents' educational influence on children's academic achievement were carried out in developed countries, indicating its positive relationships with academic achievement. However, only few studies were conducted in developing countries, which revealed similar results. For example, Lockheed, Fuller, and Nyirongo (1989) in a cross-sectional study on Thai and Malawi children found students with higher levels of achievement in 8th grade Mathematics had fathers who had more professional occupations, mothers with higher levels of education, and lived in wealthier districts. Thus, parents' educational level, irrespective of its geographical settings may to a certain extent have an impact on adolescents' progress in education.

According to Teachman (1987), "parents use material and nonmaterial resources to create a home atmosphere that fosters academic skills". It is through these resources allocated to children that may influence the attainments of learning in children. Similarly, the availability of educational resources in the home were usually associated with homes where parents were not only educated but were also financially stable. For example, children whose parents were economically resourceful tend to associate educational materials with academic achievement. Parents see these materials as agents for promoting their children interest in learning. In recent years, the existence of computers in the homes had enabled parents to be more committed in their adolescents' education and this reflects a positive parental attitude for knowledge and learning (Trusty 2000). Thus, homes with educational resources tend to instill in children the importance of higher education (Gorman 1998; Lockheed, Fuller & Nyirongo 1989; Sewell & Hauser 1980; Teachman 1987). Similarly, adolescents raised by parents with higher income households were likely to have access to quality educational resources (Kim, Hong, Gong-Soog & Rowe 2000).

FINANCIAL, HUMAN AND SOCIAL CAPITAL

One of the aspects of parental involvement that is embedded in the proximate setting is the *Capital* dimensions (financial, human & social) proposed by Coleman (1988; 1991; 1993). Coleman divided the family socio-economic status into the financial, human and social capital. According to Coleman (1988), children require these “capitals” to assist in optimal growth.

These capitals cannot function individually but need to be interrelated in order to be fully beneficial to the child’s growth. Parents who are educated (human capital) are assumed to hold stable job (financial capital) and are more inclined to be communicative with their children in terms of their children’s education (social capital). Research on parenting has shown these relationships where social capital can be measured by the quality and quantity of the interactions that connect children with the financial and human capital of their parents. For example, parents’ level of education is a predictor of children’s achievement (Haveman & Wolfe 1995; Klebanov, Brooks-Gunn & Duncan 1994; Smith, Brooks-Gunn & Klebanov 1997). It is argued that parents’ educational level will equip parents with the ability to provide a supportive learning environment in the home. As such it was found that both parents’ education was related with children’s academic achievement (Davis-Kean 2005; Smith, Brooks-Gunn & Klebanov 1997). In addition, studies have shown mothers’ education to be associated with the physical environment and learning experiences in the home (Klebanov et al. 1994) as well as a direct influence on children’s cognitive and behavioral outcomes (Corwyn & Bradley 2002). Similarly, family income contributed to children’s academic achievement (Smith, Brooks-Gunn & Klebanov 1997) as well as the physical environment and learning experiences in the home (Klebanov, Brooks-Gunn & Duncan 1994). These are the type of parents who would be aware of the importance of furnishing their homes with appropriate learning materials to give it a conducive learning atmosphere. In other words, the child’s actions are shaped by his/her social contact with both parents as well as by the financial and human capital available to the child. These may have played an important part in enhancing children’s academic achievement.

STATEMENT OF PROBLEM

In spite of numerous findings on studies that showed the relationships between socio-economic factors and academic achievement, however, studies in Malaysia on the matter is still limited. The mechanisms for understanding this influence, however, have not been well studied, especially in the Malaysian context. At the secondary school level studies were mainly on the types of parental involvement practices (Cheok Yeng Hwa & Wan Rafaei Abdul 1991-1992; Wee Beng Neo 1995), and the barriers to parental involvement in school (Badaruzaman

Abu Bakar 1992; Roslan Mohd Yusof 1988; Wee Beng Neo 1995; 1999; Wee Kok Leng 1996). While at the primary school level, studies focused on parental involvement at home and teachers' and headmasters' perception of school and family partnerships (Noran Fauziah, Jahara, Nuraini & Zahyah 2000; Wee Beng Neo 1999). Thus, this study intends to add another dimension to the existing literature by examining the influence of parents' educational level and reading materials on children's school performance.

Reflecting on the Malaysian national examination results (Ujian Penilaian Sekolah Rendah, Penilaian Menengah Rendah and Sijil Pelajaran Malaysia), children's performances in these examinations have long been a major concern to all parties involved either directly or indirectly with children's education. Reports show that there were differences between students' achievement in the urban and rural schools ("Kelas Tambahan" 2001; "Prestasi Rendah" 2001; "Kelemahan Kualiti" 2001). The consistent low performances of students in the rural areas in the three national examinations have caused much concern among policy makers, educationists and school administrators. Could this difference be due to the status in the socio-economy of the two geographical settings? Thus, it is hoped that this study would to a certain extent provide an answer.

With this scenario, the present study would focus on the following research questions: (1) what is the educational level of mothers' and fathers? (2) What are the types of reading materials available in the homes? (3) Is there a relationship between educational level, reading materials and academic achievement?

METHODOLOGY

The population in this study was secondary school students, specifically those in form five, in a rural district in the state of Kedah. The schools were identified from a current list of schools in the district, provided by the Kedah State Education Department. From this list of secondary schools (129 schools) only those in the district of Kubang Pasu (14 schools) were selected. The three schools were randomly from the list. A total of 430 respondents (284 females & 146 males) were selected for this study. Academic achievement was based on results pertaining Bahasa Melayu, Bahasa Inggeris, Science and Mathematics in the first term examination. The results were then collapsed to indicate a single grade. These subjects were chosen as they are the main subjects required for entrance to higher institutions in the country.

As the nature of this study is to investigate the socio-economic status (educational level & reading materials) and academic achievement as reported by children, a questionnaire technique was chosen as the main data collection method. The questionnaire contained mothers' and fathers' educational level and reading materials available in the home. The first item elicits parents'

educational level. This was indicated by 1 = Don't know, 2 = No schooling, 3 = Primary school, 4 = Lower secondary school (SRP/PMR/LCE), 5 = Upper secondary school (SPM/MCE), 6 = Certificate/Diploma, 7 = Degree. Respondents would indicate the highest level of education for each parent. These indicators are then categorized into five levels to indicate parents' level of education: 1 = Don't know, 2 = No schooling, 3 = Primary, 4 = Secondary, 5 = Tertiary.

The second item concerned reading materials. This was defined as reading materials available in the home. These reading materials cover: 1 = English Language newspapers, 2 = Bahasa Melayu newspapers, 3 = English Language magazines, 4 = Bahasa Melayu magazines, 5 = English Language comics, 6 = Bahasa Melayu comics, 7 = English Language storybooks, 8 = Bahasa Melayu storybooks, 9 = Computer educational programs, 10 = Educational games, 11 = None. Frequency counts would indicate the amount of reading materials available in the homes.

LIMITATIONS OF THE STUDY

There were some limitations in carrying out this study. The schools chosen were only in the Kubang Pasu District. The sample in this study consisted only Malay boys and girls, aged between sixteen and seventeen. Only Malay students were included in the study as students from this ethnic group performed poorly in the national examinations.

Data collection was carried out at the end of the first term (4 months). Most studies on parental influences on academic achievement were done over a longer period, for example, at the end of a study year (12 months). This may not be possible as the sample in this study were students in form five. The school principal prohibits research on these students after the first school term as they would be sitting for the national examination (SPM) at the end of the year. As such, this policy limits the research to a four-month study.

FINDINGS

Descriptive statistics were used to describe parents' educational level and reading materials available in the home. In addition, correlation was conducted to examine the relationships between the three variables.

Research question 1: What is the educational level of mothers' and fathers'?

Generally, both mothers and fathers do attend school (Table 1). However, their level of completing their education differs. There are more fathers with tertiary education (16.8%) compared to mothers (9.1%). However, there is not much difference between them in terms of secondary, primary and no schooling. There is a considerable percentage (22.1%) of children who never knew their

TABLE 1. Frequency distribution and percentage of parents' education level

	1	2	3	4	5	M	SD
(N=430)							
M	97 (22.6%)	10 (2.3%)	111 (25.8%)	173 (40.3%)	39 (9.1%)	3.39	1.65
F	93 (21.6%)	9 (2.1%)	91 (21.2%)	165 (38.4%)	72 (16.8%)	3.65	1.85

M = mother

F = father

1 = don't know 2 = no schooling 3 = primary 4 = secondary 5 = tertiary

parents' educational level, suggesting that there is hardly any parent-adolescent discussion on parents' academic experiences in school.

Research question 2: What are the types of reading materials available in the homes?

Overall, the descriptive analysis reports most of the respondents (78.6%) had some form of reading materials in their homes (Table 2). There are more homes with reading materials in Bahasa Melayu compared to English. Among the reading materials found in the homes, the Malay newspaper (93%) is widely read. However, in terms of English reading materials, the respondents read storybooks the most (37.9%). In addition to the reading materials, respondents had other supplementary materials such as computer program (11.2%) and educational games (0.21%).

TABLE 2. Frequency distribution and percentage of types of reading materials

	English Language	Bahasa Melayu
Newspapers	141 (32.8%)	403 (93.7%)
Magazines	91 (21.2%)	326 (75.8%)
Comics	37 (8.6%)	225 (52.3)
Story books	163 (37.9)	291 (67.7)
Computer program	48 (11.2%)	-
Educational games	93 (0.21%)	-
None	0.2 (0.5%)	-

Research question 3: Is there a relationship between educational level, reading materials and academic achievement?

Table 3 reports there exists relationship between mothers' educational level ($r = .316, p < .001$), reading materials ($r = .317, p < .001$) and academic achievement. Similarly, fathers' educational level ($r = .351, p < .001$), and reading materials ($r = .387, p < .001$) are also correlated with academic achievement.

TABLE 3. Correlation: mothers' and fathers' education level, reading materials and academic achievement

	1	2	3	4
1. Mothers' educational level	-	.513*	.316*	.317*
2. Fathers' educational level	.513*	-	.351*	.387*-
3. Educational materials	.316*	.351*	-	.470*
4. Academic achievement	.317*	.387*	.470*	-

*p <0.05

DISCUSSION

The study provided substantial empirical and theoretical evidence to support socio-economic factors (fathers' and mothers' educational level and reading materials) as being associated with adolescents' academic achievement. The findings in this study are in line with most previous research findings where parents' educational levels are related to adolescents' academic progress (Garasky 1995; Haveman & Wolfe 1995; Lockheed, Fuller & Nyirongo 1989). Parents' educational level has been consistently reported to be highly correlated with academic achievement especially when both parents have high educational level as these parents have the ability to associate educational materials with progress in their children's education (Gorman 1998; Lockheed, Fuller & Nyirongo 1989; Sewell & Hauser 1980; Teachman 1987; Trusty 2000) compared to parents with lower educational level. This finding also answers the question of whether the socio-economic status of rural and urban parents has an impact on the academic achievement of adolescents. In this study, the parents are in a rural district. Thus, it is not so much of the geographical settings but more of the parents' economic status. In this case parents are in a rural district, their educational level and reading materials in the home, to a certain extent do influence children's school performance. To say that children in rural areas perform poorly compared to urban children would be generalizing as poor performance in school does not fully depend on location but more so on parents' socio-economic status.

The presence of reading materials in the home is found to be moderately associated with adolescents' academic achievement. However, previous studies reported the correlation to be high. This difference could be attributed to parents' educational level. Parents from high socio-economic status may be able to assist their adolescents in purchasing the appropriate reading materials based on their own academic ability compared to parents with lower educational background. This could apply to the present study where majority of the parents are from the lower educational level. Perhaps due to their lack in academic competence they would leave this matter solely to their children. Thus, these adolescents may tend to limit their purchase of reading materials to merely newspapers

and low quality materials. As a result, the existence of an abundance of reading materials in the home may not necessarily contribute much to academic achievement, especially when the materials are of poor quality and are not related to school subjects.

In addition, parents with lower educational level may not be able to possess the skill at capitalizing the reading resources available in the home compared to parents with higher educational level. According to Coleman (1988), even though parents may have high educational level (human capital) if it is not accompanied with high parent-child interaction (social capital) using the reading materials available in the home, the high academic acquisition skill that parents have would not be transmitted to the betterment of the child's educational growth.

Another possible reason for reading resources not to correlate highly with academic achievement in this study could be the type of reading materials that were posed in the questionnaire item. The item requested respondents to select general reading materials, for example, newspapers, magazines, comics, storybooks, educational computer program, and educational games. These materials are not specific in terms of their contribution to academic subjects, for example, workbooks, references, and textbooks. The difference in the nature of the reading materials may have a lesser impact on academic achievement.

This discussion leads to two important conclusions about educational level and reading materials. First, three areas need to be addressed: teachers' support, academic encouragement, and academic assistance. For example, children with parents from lower socio-economic status need to have more educational support from teachers, as these children are unlikely to get full support from their parents. Teachers and schools should have intervention or support programs that look into these children's academic affairs to ensure they are not at a disadvantage just because they come from lower socio-economic background. By having such programs it will allow lower academic achievement students to be at par with children in the mainstream. Parents on the other hand, need to attend parenting classes to educate them on the importance of being supportive of their children's learning – parental support, academic encouragement, and academic assistance. It is not true to say that parents are unable to change their parenting of adolescents. They can and do change their approaches and expectations if proper parenting programs are offered.

CONCLUSION

This study has added to the literature on parental influence on Malaysian children's academic achievement in important ways. First, the paths linking these variables to children's academic achievement reflect the drawbacks of Malay parents who are uneducated. The parents in this study are unable to be directly involved in their children's learning process. To truly understand how parents'

educational level ultimately impact children's learning, it will be important in future research to replicate this finding as well as to examine how these processes might differ by racial group, location, and parents' age group. Second, future studies need to examine other socio-economic factors such as parents' profession, salary, and number of household members. In addition factors such as tuition centers and extra-classes may have indirect influence on adolescents' academic achievement. Finally, the findings in this study cannot be generalized as the study only examined three secondary schools in a rural district. Future study should include more schools, from rural as well as urban so as to examine whether similar findings will be cited.

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