Unequal Childhoods in China:

Parental Education, Children's Time Use, and Child Development

Zheng Mu University of Michigan

Qing Lai Florida International University

Abstract

Previous literature has established that child development is greatly influenced by the family socioeconomic background. This study aims to articulate the role of parenting style in this process. We examine, in the context of China, how parental background leads to different styles of parenting (i.e., concerted cultivation vs. accomplishment of natural growth) (Lareau 2011). We also investigate how parenting styles ultimately affect various developmental outcomes of Chinese children. Based on a national sample of Chinese school-aged children (CFPS 2010), we found that family socioeconomic background had a strong impact on the style of parenting. Higher parental education leads to stronger concerted cultivation, which however, only helps with children's education-related outcomes (i.e., educational expectation and academic performance). On the other hand, less educated parents rely more on the strategy of accomplishment of natural growth, which consistently exert a negative influence on educational expectation, academic performance, and non-cognitive skills.

Motivation and Research Question

Research in life course and social stratification has long established the link between family context and child development (Astone and McLanahan 1991; Kao and Thompson 2003; Lucas 2001; Thornton 2001; Yeung et al. 2001). Children's cognitive ability, educational and occupational expectations, academic achievement, health, self-esteem, values, and developmental problems are all strongly influenced by the socioeconomic standing of the family (Bengtson, Biblarz & Roberts 2002; Duncan & Brooks-Gunn 1997; Entwisle, Alexander & Olson 2004; Mayer 1997). More advantageous parental socioeconomic background enables not only better material well-being for the children (e.g., nutrition, quality health care, access to educational resources), but also more effective parenting (Conger et al. 1992; Elder et al. 1992; Sampson & Laub 1994).

Much empirical work has been done to assess various aspects of parenting in child development. The quality of parent-child emotional bonds, for example, is an important factor of more successful childhoods (Hanson, McLanahan & Thomson 1997). Parenting behaviors such as spending time with children and active supervision and discipline also lead to positive outcomes of children's development (Parke & Buriel 1998). However, the literature of life course and social stratification has seen limited effort to incorporate the sociological insight offered by Lareau (2011), who identified two major styles of parenting—concerted cultivation and accomplishment of natural growth—that correspond to American working class and middle class families, respectively.

This study aims to evaluate the role of parenting in the relationship between parental background and child development by applying Lareau's (2011) categories to survey data. The two parenting styles are operationalized using children's time spent on different activities. We first examine if parental socioeconomic background drives them to concerted cultivation or accomplishment of natural growth. We then further investigate if parenting style makes a difference in child development. Specifically, we look at four developmental outcomes—educational expectation, academic performance, non-cognitive skills, and mental health.

Data and Variables

Our analysis uses survey data from the 2010 Chinese Family Panel Studies (CFPS). Besides adult information, CFPS 2010 also provides a national sample of Chinese children aged 0-15 (N = 8,990). Our analytic sample is restricted to 2,777 children aged 10-15 who (or whose guardian) provided valid information on developmental outcomes, weekly time use, parental education, and socio-demographic controls. As shown in Table 1, close to 40% of those children live in urban areas and 89% are ethnically Han, which are similar to the demographic composition of China's children population of comparable ages.

As aforementioned, our analysis goes through two phases. We first examine the impact of family socioeconomic background on parenting styles, and then continue to ask how different styles of parenting affect various child developmental outcomes. As the CFPS 2010 children sample does not provide usable information on family income, we use father and mother's education to indicate parental socioeconomic background. As shown in Table 1, fathers of the children in this study on average spent 6.9 years in school, while mothers have received an average of 5.4 years of school education. About 45% of fathers and 50% of mothers have achieved less than secondary education. Given that parents are members of older cohorts and a majority (roughly 60%) reside in rural places, such relatively low levels of education can be reasonably expected. Analytically, the large amount of variation in parental education provides much leverage in examining its influence on parenting styles. For descriptive tables (i.e., Tables 1 and 2), we show father's and mother's education separately. For the models (i.e., Tables 3 and 4), in the interest of parsimony, we use the average years of schooling of both parents.

To operationalize parenting style, our focal concept, we utilize the time-use module of the CFPS 2010 Children Questionnaire. CFPS 2010 does not provide measures that directly address parenting behaviors, but each child (or the guardian) was asked to report his/her activity-specific time use, on hourly basis, during weekdays and weekends. We calculated the weekly sum of hours spent on each activity, and further aggregate them into three major categories: planned activities-academic (i.e., time at school, time doing homework), planned activities- non-academic (i.e., time spent on after-school training in arts and sports, socializing, and community services), and unplanned activities (i.e., TV and music, playing). Children's engagements in different types of activities are thus measured on a continuous temporal scale, which we use as indicators of different styles of parenting. More hours spent on planned activities—both academic and non-academic—correspond to Lareau's (2011) "concerted cultivation". On the other hand, more time for unplanned activities goes with the "accomplishment of natural growth." As shown in Table 1, on average, Chinese children spend much longer time on planned activities (45.3 hours per week on academic and 6.8 hours on non-academic) than unplanned activities (14.6 hours per week).

Finally, our ultimate outcome, child development, is measured on four aspects—educational expectation, academic performance, non-cognitive skills, and mental health. Educational expectation is coded into a linear outcome as expected years of schooling. Academic performance index is the average of self-reported verbal and math scores on a 100-piont scale. Non-cognitive skills and mental health are measured with 5-point composite indices based on a battery of survey items. Mental health items include children's self-assessments on frustration, nervousness, anxiety, pessimism, struggling, and lack of meaning in life. Non-cognitive skills index is constructed based on guardians' answers regarding the children's diligence, carefulness, attention, obedience, persistence, and abilities to prioritize and organize. All the four dependent variables are coded such that higher values represent more desirable developmental outcomes. Table 1 shows that the children on average expect to go beyond secondary education (14.9 years), and score 79.8 on academic performance. The mean levels of their self-discipline index and mental health index are 3.5 and 4.5, respectively.

Preliminary Results

Tables 2 and 3 summarize the results of our first stage of analysis, where parental education is used to predict the style of parenting. Table 2 describes detailed time use by father and mother's level of education. Except for socializing, community service, TV& music, and play, where slight curvy-linear relationships are observed, weekly hours for all planned activities increase with parental education, while hours for unplanned activities are negatively associated with parental education.

These descriptive results are parallel to the bivariate models in Table 3, which conclude that for each year increase in parental average years of schooling, the children would spend .63 more hours per week on planned academic activities, .27 more hours on planned non-academic activities, and .28 less hours on unplanned activities. All these differences are statistically significant. After controlling for sociodemographic characteristics (i.e., age, gender, urban/rural residence, ethnicity, and provinces), the increases invoked by one more year in parental education become .19 hours and .27 hours for academic and non-academic planned activities, respectively. In the case of unstructured activities, one year increase in parental education leads to .28 hours decrease per week. Again, all three partial effects are statistically significant. Taken together, this means that more education drives parents to stronger concerted cultivation, or higher degrees of centration on structured activities, while less education moves parents closer to accomplishment of natural growth.

Does concerted cultivation in turn contribute positively to children's development? Our analysis provides mixed results. As shown in Table 4, other things being equal, more engagement in planned academic activities leads to higher educational expectations and better academic performance, but makes no difference in terms of non-cognitive skills and mental health. In fact, our sample yields a negative (but rather weak and statistically insignificant) relationship between planned academic activities and mental health. Time used on planned non-academic activities positively contribute to educational expectation and academic performance (though only marginally significant for the latter). Its impact on children's non-cognitive skills is minimum and statistically insignificant. It has a notable negative impact on mental health, which might due to the highly competitive nature of arts/sports training in China.

The evidence for the adverse effects of the accomplishment of natural growth is more consistent. More hours spent on unplanned activities predict lower educational expectation, weaker academic performance, and weaker non-cognitive skills. In addition, it provides no benefits for children's mental health.

In sum, family socioeconomic background indeed has a strong impact on the style of parenting. Higher parental education leads to stronger concerted cultivation, which however, only helps with children's education-related outcomes (i.e., educational expectation and academic performance). In fact, more hours spent on structured non-academic activities adversely affect children's mental health. On the other hand, lower parental education leads children to engage more in unstructured activities, which consistently exert a negative influence on educational expectation, academic performance, and non-cognitive skills.

Table 1. Sample Descriptive Statistics (N=2,777)

	Mean	S.D.
Children's outcomes		
Educational expectation (in years)	14.9	3.4
Academic performance index (1-100)	79.8	17.6
Non-cognitive skills index (1-5)	3.5	0.6
Mental health index (1-5)	4.5	0.6
Weekly time use (in hours)		
Planned activities: academic	45.3	16.5
Planned activities: non-academic	6.8	6.4
Unplanned activities	14.6	9.4
Parental education		
Father's level of education		
Less than primary education	0.19	0.39
Primary education	0.26	0.44
Secondary education	0.50	0.50
Post-secondary education	0.06	0.24
Father's years of schooling	6.9	4.3
Mother's level of education		
Less than primary education	0.33	0.47
Primary education	0.26	0.44
Secondary education	0.36	0.48
Post-secondary education	0.05	0.21
Mother's years of schooling	5.4	4.6
Control variables		
Male (ref.=female)	0.50	0.50
Age	12.5	1.7
Urban residence (ref.=rural)	0.39	0.49
Ethnic minority (ref.=Han)	0.11	0.31

Notes: The sample is restricted to school-aged (10-15) children with valid answers for all analytic variables.

Source: 2010 Chinese Family Panel Studies.

Table 2. Itemized Weekly Time Use by Parents' Level of Education

	Planned activities												Unplanned activities				N
	Academic				Non-academic												
	School		Homework		Arts		Sports		Social		Community		TV & Music		Play		
	Mean	*S.D.*	Mean	*S.D.*	Mean	*S.D.*	Mean	*S.D.*	Mean	*S.D.*	Mean	*S.D.*	Mean	*S.D.*	Mean	*S.D.*	
Overall	33.7	*14.3*	11.6	*6.5*	1.4	*3.5*	2.6	*3.2*	2.7	*4.0*	0.1	*0.7*	9.2	*6.6*	5.3	*5.9*	2,777
Father																	
Less than primary education	31.6	*15.1*	10.8	*5.8*	0.9	*2.4*	2.0	*2.9*	2.5	*4.1*	0.0	*0.3*	9.5	*7.2*	4.8	*5.7*	520
Primary education	33.5	*14.2*	11.0	*6.0*	1.0	*3.0*	2.6	*3.2*	2.7	*4.0*	0.1	*0.8*	9.5	*6.6*	5.6	*6.2*	709
Secondary education	34.3	*14.2*	11.9	*6.6*	1.6	*3.7*	2.8	*3.2*	2.8	*4.1*	0.1	*0.8*	9.2	*6.5*	5.4	*6.0*	1,382
Post-secondary education	35.3	*13.5*	14.7	*8.8*	3.3	*4.8*	3.2	*3.3*	2.2	*3.5*	0.1	*0.6*	7.3	*5.3*	5.0	*5.0*	166
Mother																	
Less than primary education	31.4	*14.9*	10.8	*5.7*	1.0	*2.6*	2.2	*2.9*	2.5	*3.6*	0.1	*0.5*	9.5	*7.0*	5.4	*6.0*	922
Primary education	34.6	*13.5*	11.0	*5.9*	1.0	*2.9*	2.5	*3.1*	3.0	*4.3*	0.1	*0.8*	9.7	*6.9*	5.8	*6.4*	733
Secondary education	34.6	*14.4*	12.4	*7.2*	1.8	*4.1*	2.9	*3.3*	2.6	*4.2*	0.1	*0.8*	9.0	*6.2*	4.9	*5.6*	991
Post-secondary education	37.0	*12.6*	15.3	*8.4*	3.5	*5.0*	3.7	*3.5*	2.6	*3.9*	0.1	*0.6*	6.8	*5.2*	4.8	*4.8*	131

Notes: The sample is restricted to school-aged (10-15) children with valid answers for all analytic variables.

Source : 2010 Chinese Family Panel Studies.

Table 3. Linear Models Predicting Weekly Time Use (in Hours) (N=2,777)

	Planned activities: academic		Planned activities: non-academic		Unplanned activities	
Parental average years of schooling	0.63 ***	0.19 *	0.27 ***	0.23 ***	-0.15 **	-0.28 ***
	(0.08)	(0.09)	(0.03)	(0.04)	(0.04)	(0.05)
Male		-1.22 *		0.93 ***		1.78 ***
(ref.=female)		(0.57)		(0.24)		(0.33)
Age		1.84 ***		0.24 ***		-1.11 ***
		(0.17)		(0.07)		(0.10)
Urban residence		3.07 ***		0.82 **		0.73 †
(ref.=rural)		(0.69)		(0.29)		(0.40)
Ethnic minority		-1.09		-0.17		-0.38
(ref.=Han)		(1.18)		(0.49)		(0.69)
Constant	41.43 ***	20.65 **	5.12 ***	6.07 *	15.50 ***	27.04 ***
	(0.57)	(7.22)	(0.22)	(5.29)	(0.33)	(4.22)
R^2	0.022	0.168	0.027	0.060	0.004	0.121

Notes: The sample is restricted to school-aged children (10-15) with valid answers for all analytic variables.
Standard errors are reported in parenthese.
Province dummies are included to control for regional variations. Results are not reported.
p < 0.1†, < 0.05*, < 0.01**, < 0.001***.

Source: 2010 Chinese Family Panel Studies.

Table 4. Linear Models Predicting Children's Outcomes, Regular and Standardized Coefficients (N=2,777)

	Educational expectation (in years)		Academic performance index (1-100)		Non-cognitive skills index (1-5)		Mental health index (1-5)	
	Regular	Standardized	Regular	Standardized	Regular	Standardized	Regular	Standardized
Planned activities: academic	0.12 **	0.06	0.96 ***	0.09	0.00	0.01	-0.01	-0.02
(per 10 hours)	(0.04)		(0.20)		(0.01)		(0.01)	
Planned activities: non-academic	0.41 ***	0.08	0.92 †	0.03	0.01	0.01	-0.06 **	-0.06
(per 10 hours)	(0.10)		(0.47)		(0.02)		(0.02)	
Unplanned activities	-0.35 ***	-0.10	-1.45 ***	-0.08	-0.08 ***	-0.12	0.00	0.00
(per 10 hours)	(0.07)		(0.34)		(0.01)		(0.01)	
Parental average years of schooling	0.22 ***	0.25	1.09 ***	0.24	-0.01 **	-0.06	0.00	0.00
	(0.02)		(0.09)		(0.00)		(0.00)	
Male	-0.01	0.00	-2.88 ***	-0.08	-0.21 ***	-0.18	0.00	0.00
(ref.=female)	(0.12)		(0.60)		(0.02)		(0.02)	
Age	-0.25 ***	-0.13	-0.23	-0.02	0.02 *	0.04	-0.02 **	-0.06
	(0.04)		(0.18)		(0.01)		(0.01)	
Urban residence	0.26 †	0.04	2.41 **	0.07	-0.05 †	-0.04	0.02	0.01
(ref.=rural)	(0.15)		(0.72)		(0.03)		(0.03)	
Ethnic minority	-0.14	-0.01	-2.01	-0.04	0.00	0.00	0.01	0.00
(ref.=Han)	(0.25)		(1.22)		(0.05)		(0.05)	
Constant	15.77 ***		65.87 ***		3.89 ***		5.23 ***	
	(1.54)		(7.53)		(0.28)		(0.31)	
R^2	0.146		0.224		0.077		0.039	

Notes: The sample is restricted to school-aged children (10-15) with valid answers for all analytic variables.
Standard errors are reported in parenthese.
Province dummies are included to control for regional variations. Results are not reported.
p < 0.1†, < 0.05*, < 0.01**, < 0.001***.

Source: 2010 Chinese Family Panel Studies.

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