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Double Victims?
Parental Migration, Divorce, and Adolescents' Transition to High School in Rural China

Shu Hu
Asia Research Institute, National University of Singapore
arihus@nus.edu.sg

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Asia Research Institute
National University of Singapore
469A Tower Block #10-01,
Bukit Timah Road,
Singapore 259770
Tel: (65) 6516 3810
Fax: (65) 6779 1428
Website: www.ari.nus.edu.sg
Email: arisec@nus.edu.sg

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ABSTRACT

Using both quantitative and qualitative data collected in a migrant-sending county from 2012–2013, this research examined how parental migration affects the educational outcome of adolescents in rural China. The results indicate an overall negative effect of parental migration on educational outcome. On one hand, parental migration increases children's educational wellbeing by affording parents an opportunity to stress the importance of education to their children. On the other, parental migration also decreases children's educational wellbeing by increasing the odds of parental divorce. When only the mother or both parents migrate, there is a higher likelihood of a parental divorce, which significantly increases risks of discontinuing schooling and transitioning to vocational high school relative to attending academic high school. In contrast to the conventional explanations of economic resources, psychological health, caregiver involvement, this paper emphasizes the significant role of marital instability in the link between parental migration and children's educational wellbeing.

INTRODUCTION

Labor out-migration has led to major transformations in family structure and dynamics in many developing societies (ACWF, 2013; Bryant, 2005). Due to the costs and uncertainties of migration and resettlement and the exclusion of migrants and their families from social welfare and services in destination areas, most migrant parents leave their children behind in origin places. As a result, an increasing number of children are growing up in absence of one or even two migrant parents. In China alone, as of year 2010, 61 million rural children are left behind as one or both of their parents migrate to mostly urban areas in search of better economic opportunities (ACWF, 2013). What are the implications of parental migration for the educational opportunity of left-behind children in rural China?

Research on how parental migration affects children's educational wellbeing in developing countries has produced mixed findings. This implies that parental migration is a comprehensive and dynamic phenomenon. The different facets of parental migration may function both to benefit, or harm, the wellbeing and achievements of children. On one hand, parental migration brings in income and releases the financial constraints of the household, and thus may promote children's education since additional resources are available for food, health care, and education (Lu & Treiman, 2011; Yang, 2008). On the other, the lengthy absence of migrant parents may potentially jeopardize children's psychosocial wellbeing, reduce the care, supervision, and academic assistance that children can receive at home, and unfavorably affect their educational outcomes (Dreby, 2007; Lahaie et al., 2009; Xiang, 2007). Parental migration may facilitate the labor out-migration of children and demotivate them from pursuing higher educational aspirations (Kandel & Kao, 2001). Still other studies have found neutral impact of parental migration on the education of left-behind children (Arguillas & Williams, 2010; Jordan & Graham, 2012; Lu, 2012; Xu & Xie, 2013; Zhou et al., 2015). These findings suggest that it is important to identify the underlying economic and social mechanisms through which parental migration affects children's educational wellbeing. Also, how the overall relationship between parental migration and children's education plays out may vary across different contexts (Lu, 2014). This study aims to closely investigate the underlying processes of parental migration in relation to its role for children's education in the context of rural China.

One potential mechanism linking parental migration to educational outcome that has not been explored in the literature is parental divorce. Labor out-migration of adult members of a Chinese family often involves labor division between genders and generations (Fan, 2003, 2008). Spouses may become separated from each other for long periods of time due to out-migration of one party or migration of both parties to different destinations. Long-term spousal separation is likely to lead to marital instability or estrangement and dissolution. Particularly, wives' migration might be especially stressing the marital relationship, because it is inconsistent with the traditional gender division of labor with the husband being the main breadwinner and the wife staying at home. Moreover, migration pulls individuals out of a tight-knit network of friends, acquaintances, and extended family members, and consequently reduces both social support for the maintenance of a marital union and barriers to the dissolution of the marriage (Booth, Edwards, & Johnson, 1991). Given the numerous studies showing negative effects of parental divorce on children's lives (Amato, 2000; Amato & Cheadle, 2005; Amato & Keith, 1991; Kim, 2011; MacLanahan & Sandefur, 1994), it is worth exploring whether parental migration affects educational outcomes through parental divorce.

In this study, I first showed to what extent parental migration is associated with the risk of divorce. Studies have suggested that the experience of migration is strongly associated with the odds of divorce (Du, 2010; Frank & Wildsmith, 2005; Landale & Ogena, 1995). These findings do not imply that divorce is an inevitable outcome of individual labor out-migration. Labor out-migration could be a way to get away from an unhappy or even abusive marital relationship. In other words, it might be

the case that marital problems lead to labor out-migration. To partially address the issue of reverse causality, sensitivity tests were conducted. However, this study is unable to fully address the selection bias in the association between labor migration and marital dissolution. It only endeavors to highlight the role of parental divorce as a potential channel linking parental labor migration and child outcome.

I then showed how parental migration affects children's transition to high school through parental divorce, while taking into consideration the other mediating pathways. Transition to high school is a crucial moment for rural youth, given the importance of educational attainment in securing better job and lifelong economic prospects. Since the college expansion policy in the late 1990s, the opportunity of higher education has increased considerably for young Chinese, benefiting different social groups unequally (Yao et al., 2010; Yeung, 2013). Compulsory education in China covers only six years of primary school and three years of middle school. Middle school graduates compete for limited slots in high school by taking the high school entrance exam. Based on the results of this exam, adolescents are placed in two different tracks of high school: academic vs. vocational; and unsurprisingly, academic senior high school provides much better prospects of higher education. Researchers have shown that transition from middle school to high school remains a bottleneck for rural youth in educational advancement (Hannum, An, & Cherng, 2011; Liu et al., 2009a).

This study was facilitated by detailed quantitative and qualitative data on final-year adolescents in middle schools located in a migrant-sending county of central China. Generalized structural equation modeling was used to delineate the direct and indirect effects of parental migration on educational outcomes.

LABOR MIGRATION AND MARITAL DISSOLUTION

One theoretical foundation for hypotheses about the relationship between migration and marital instability is drawn from studies of social integration and divorce (Booth et al., 1991; Breault & Kposowa, 1987; Glenn & Shelton, 1985; Glenn & Supancic, 1984; Trovato, 1986). The basic argument made in this literature is that the level of social integration is negatively related to divorce rates. Where social integration is high, married persons are embedded in a tight-knit network of friends, acquaintances and extended family members, which helps to enforce compliance with social norms emphasizing marital commitment and family cohesion. This framework has received empirical support from studies both at the aggregate level (Breault & Kposowa, 1987; Fenelon, 1971; Finnäs, 1997; Glenn & Shelton, 1985; Shelton, 1987; Trovato, 1986) and at the individual level (Frank & Wildsmith, 2005; Landale & Ogena, 1995).

The second framework linking mobility and marital dissolution can be found in the micro-level analysis of benefits and costs (Becker, Landes, & Michael, 1977; Levinger, 1976). This framework posits that individuals make marital decision based on the relative benefits or costs of remaining in the same marriage or becoming divorced. If the benefits of staying married are greater than the expected benefits of marital dissolution, individuals will choose to remain married; otherwise, individuals will opt out of the marriage.

The third framework is concerned with shifting normative values about marriage and family life (Thornton, 2001; Thornton & Lin, 1994). Over the past few decades, the norms against divorce, premarital sex, cohabitation, and childbearing outside of marriage have weakened substantially and the divorce laws have been liberalized in northwestern Europe and other developed countries. Educational expansion, urbanization, and mass media have greatly facilitated the access to and adoption of these new ideas in other parts of the world.

Applying these three frameworks in the context of China's internal labor migration, it is reasonable to expect a positive association between individual labor migration and marital dissolution. Firstly, for a substantial amount of time during their married life, husbands and wives involved in internal labor migration live apart from each other. The long-term absence of migrant spouse from the home and the anonymity of migrant life in industrial towns and cities may increase the chances of transgression for both parties. A national survey conducted in 2000 showed that the proportion of respondents who had experienced extramarital sex was about 23%-24% for migrant workers, higher than that for both rural and urban residents (Pan et al., 2004:271). Secondly, the rewards associated with marriage such as sharing living costs, receiving physical help, company, and care, and daily intimacy and sexual life have drastically decreased in the case of spousal separation due to labor migration. This may gradually lead to estrangement between the couple and their declining commitment to the union. Thirdly, work and life in the cities may expose migrant workers to different values and attitudes about spousal roles and marital relations. For example, migrant workers may start to have different expectations for their spouses as a result of their observation of the supposedly more egalitarian marital relationship in urban areas (Fan, 2008:131-132).

Scholars have suggested a positive correlation between labor migration and marital dissolution in China (Du, 2010; Shi, 2006). This association, however, is likely to be gendered. Traditional gender norms have remained strong in rural China and the age-old inside-outside dichotomy in gender roles defines the woman's place to be inside the family and the man's sphere to be outside. The gendered division of labor helps to explain why fathers are more likely to be migrant workers than mothers, and rural children are more likely to stay behind with mothers than with fathers (ACWF, 2013). This arrangement of father being a migrant worker and mother staying at home is consistent with the traditional gender roles and expectations, and thus is expected to be least disruptive to the marital relationship. On the contrary, mother's labor out-migration not only leads to their absence from home, but also increases their economic independence and autonomy. The rising economic status of female migrants relative to their non-migrant spouses is likely to rewrite the power balance between husband and wife, which may threaten the masculine identity of the husband as the primary breadwinner and strain the marital relationship (Fan, 2008:91-92). This study hypothesizes that the out-migration of mothers but not fathers significantly increases the risk of parental divorce.

PARENTAL MIGRATION AND CHILDREN'S EDUCATION

News reports and ethnographic studies in rural China often suggest that left-behind children tend to suffer academically, emotionally, and socially (Xiang, 2007; Ye & Pan, 2011). However, some recent comparative studies based on nationally representative samples found that left-behind children fare as well as their non-left-behind counterparts (Ren & Treiman, 2013; Xu & Xie, 2015; Yeung & Gu, 2016). Another study doing meta-analysis of

Other studies reveal that the age of the child at separation from parents (Liu, Li, & Ge, 2009b), the gender of migrant parent (Lu, 2012), the gender of left-behind child (Meyerhoefer & Chen, 2011), and sociocultural context (Lu, 2014) all matter in the association between parental migration and child outcome. These findings imply the dynamic and multi-faceted nature of parental migration, which can affect children's lives in multiple ways. Parental absence due to labor out-migration has different implications for distinct forms of family and parental resources that are important to the development and wellbeing of the children. The overall effect of parental labor migration on children's educational outcomes depends on whether the beneficial pathways will countervail the adverse pathways. It is thus important to not only examine the overall effect of parental migration on children's wellbeing, but also investigate the underlying various mechanisms.

The most studied channel linking parental migration and child development is the economic resources mechanism. Increased financial resources enabled by parental labor migration make adequate food, shelter, other material goods, stimulating learning materials, and educational investment more affordable, hence may positively affect children's nutrition, health, cognitive development, and educational attainment. A number of empirical studies have shown positive effects of parental labor migration and remittance on left-behind children's educational outcomes (Acosta, 2006; Edwards & Ureta, 2003; Lu & Treiman, 2011; Morooka & Liang, 2009; Yang, 2008).

Nonmaterial family resources such as attention, care, and supervision, are also important to child development (Carlson, 2006; Coleman, 1988). Parent-child separation is found to be harmful to a child's psychological wellbeing (Amato, 1991; Dawson, 1991). Emotional problems can affect a child's ability to concentrate, leading to poor academic performance (Fröjd et al., 2008). The same associations may also apply to migrant parents and left-behind children who are usually separated for extended spells of time. Empirical studies on China have produced mixed results regarding the effect of parental migration on psychological wellbeing (Jia & Tian, 2010; Liu et al., 2009b; Ren & Treiman, 2013; Su et al., 2013; Xu & Xie, 2015). These studies have treated psychological wellbeing as one of the main dependent variables when dealing with the consequences of parental migration. This study will explore the potential role of psychological wellbeing as a mediating channel between parental migration and educational outcome.

In family structure and child development literature, children in divorced or single-parent families, compared to those who stay with both parents, are generally found to be disadvantaged in terms of educational outcomes and other aspects of wellbeing (Amato & Cheadle, 2005; Fomby & Cherlin, 2007; MacLanahan & Sandefur, 1994). Their disadvantages are likely due to fewer economic resources, less parental attention and care, and psychological challenges associated with adjusting to parental conflict and new family arrangements (Amato, 2000; Amato & Keith, 1991; Astone & McLanahan, 1991; Carlson, 2006). Given the theoretical and empirical evidence suggesting that labor migration is associated with higher risks of divorce, this study endeavors to explore the role of parental divorce as a potential channel linking parental labor migration and child outcome.

The social remittance perspective focuses on the ideas, behaviors, norms, and values transmitted by migrant workers from their work destinations to their origin communities (Levitt, 1998). Migrant parents are likely to adopt new knowledge, values, and practices, from destination cities that are often perceived as more advanced both socially and economically than their home communities, and they are likely to transmit their newly acquired values, attitudes, and aspirations, to their children. This study will focus on one aspect of the social remittance associated with parental labor migration: the children's own perception of the value of education. Children who are socialized to perceive education as crucial to their future development are more willing to devote time and effort to study and are more likely to do well in school and move on to the next level of the school system.

All factors taken into account thus far reveal that parental migration is a comprehensive and dynamic phenomenon. A sound general explanation of the relationship between parental labor migration and children's educational wellbeing thus needs to synthesize different perspectives. The economic resources mechanism has received more research attention and empirical support, compared to the psychological wellbeing pathway and the social remittance pathway. Few scholars have paid attention to the potential role of parental divorce in understanding the impact of parental labor migration on children's wellbeing.

This study will contribute to a more comprehensive understanding of the consequences of parental labor migration for adolescents' educational outcomes by combining and simultaneously examining the different pathways. In particular, this study explores the speculated relationship between parental labor out-migration and parental divorce in China and how this relationship affects the wellbeing of rural adolescents. Since transition to senior high school has long-reaching implications for rural youth's educational attainment and future prospects, focusing on the educational outcome of final-year middle school adolescents offers some insight into the long-term impacts of parental migration on children's wellbeing.

METHODS

Data Collection

The data for this study were collected between September 2012 and October 2013 from a migrant-sending county located in Hubei Province of Central China. The GDP per capita for Hubei in 2012 is about 38,572 RMB, equivalent to around 6,100 USD, slightly lower than the national average (Hubei Bureau of Statistics, 2013). Hubei, the ninth most populous province according to the 2010 census, is one of the largest providers of interprovincial labor migrants in China. The percentage of rural children who are left behind by migrant parents in Hubei has exceeded 40% (ACWF, 2013). Being a middling province in China both socially and economically, Hubei has the potential to deduce illustrative insights into the influence of parental migration upon left-behind children.

The target population is final-year adolescents in middle school. Stratified cluster sampling was used to obtain the adolescent sample. The county consists of two townships and nine towns, which vary in population size, share of agricultural population, income level, and out-migration rate. On average, towns tend to have lower share of agricultural population and higher population density than townships, and the county seat—the town where county government is based—is usually the most economically and socially developed town of the whole county. There are 18 middle schools distributed across this county: 6 are located in the county seat, 9 in the other eight towns, and 3 in the two townships. For my research I chose one school located in a township, one school located in a town, and one school from the county seat. All final-year adolescents from these three schools and their caregivers and teachers were recruited in this study, yielding a sample of 452 adolescents aged between 14 and 17.

To investigate the mechanisms through which parental migration affects educational wellbeing, I used mixed methods to collect information from adolescents, parents or other caregivers, teachers, and schools. Adolescent questionnaire, family and caregiver questionnaire, and teacher questionnaire collected information on adolescents' academic performance and aspirations, attitudes toward education, psychological wellbeing, parental migration status, parent-child relationship, and other family background information. For more detailed information on adolescents' daily lives and family situation, a subset of the adolescent sample (17 boys and 21 girls) was selected based on gender, school, and parental migration status for in-depth interview. Some of their caregivers and teachers were also interviewed.

The information I collected from the 452 adolescents in the whole sample revealed that 16 adolescents had lost one or both parents. To reduce the complication of examining how children from migrant families fare relative to those from non-migrant families, I excluded those adolescents from the data analysis. I also excluded from data analysis 13 adolescents whose final transitioning outcome was incomplete on account of missing information. These steps left us with a sample of 423 adolescents, about 94% of the total number of adolescents recruited. I compared the

characteristics of those with and those without missing value on transitioning outcome and found no significant differences in parental migration status, parental marital status, academic performance, depressive symptom scores, number of books at home, value toward education, gender, age, number of siblings, parental education, and family economic status. The nonresponse rates of variables used in the final analytic sample are below 7%.

Variables

Because the focus of this paper is on the association between parental labor migration and divorce, and the effects of labor migration and divorce on adolescents' educational outcome, the two main independent variables are parental migration status and marital history. Parental migration status is measured by four categories: non-migrant, father-migrant, mother-migrant, and parents-migrant. Parental divorce is a dichotomous variable that indicates whether a divorce had occurred between parents by the time of the survey in October 2012. The outcome of transition from middle school to high school was coded into three categories: leaving school, going to vocational high school, and going to academic high school.

In addition to parental divorce, other mediating variables tested in this study include social remittance (value toward education), educational investment (number of books at home), and psychological wellbeing (depressive symptom scores). I created a scale to measure adolescents' value about education. Adolescents indicated on a 1 (completely disagree) –4 (completely agree) scale how much they agreed with the following statements: 1) college education is necessary for me to do what I want to do in the future; 2) I need to get good scores in school in order to get a good job when I grow up; and 3) performing well in school is the best way to future success for me. The Cronbach's α coefficient for the education value scale is 0.83.

Adolescents reported the number of books they had at home by choosing from the following categories: none; less than 10; 10-21; 21-50; 51-100; 101-500, or more than 500. I recoded their answers and created a dummy variable "having more than a few books at home": 0 if they chose "none" or "less than 10", and 1 if they ticked the other categories. This variable is used as a proxy of the educational investment of the parents.

For psychological wellbeing, I adopted a scale of depressive symptoms from the 2010 Child Questionnaire of Chinese Family Panel Studies (CFPS) conducted by Beijing University. The list includes: 1) feeling depressed, unexcited about anything; 2) felling anxious; 3) feeling uneasy, restless, finding it difficult to remain calm; 4) feeling the future is hopeless; 5) finding it difficult to do anything; 6) feeling life is meaningless. Adolescents indicated their frequency of feeling in specific ways in the past month on a 1–5 scale in which: 1=never, 2=sometimes, 3=half of the time; 4=often; and 5=almost every day. Next, an index of depressive symptoms was constructed by taking the mean score over the six items. The Cronbach's α coefficient for the depressive symptoms scale is 0.85.

I used raw Chinese and Math scores in a countywide comprehensive examination held by the county bureau of education in November 2012 to measure academic performance. All final-year adolescents in middle schools in the county took part in this uniform and compulsory exam at the same time and on the same dates. The theoretical range of both Chinese and Math test scores is from 0 to 120. In the multivariate analyses, the standardized total scores of Chinese and Math are controlled for.

A series of demographic and socioeconomic status variables, which may intervene in the association between parental migration and educational attainment, are controlled for. For gender, being female is coded as 1 and being male is coded as 0. Age and the number of siblings are continuous

variables. Father's and mother's educational attainment are measured by three categories: primary school or below, middle school, and high school or above. Family computer ownership is a dummy variable that indicates whether an adolescent's family owns a computer at home or not. This variable, the best available piece of information on family economic situation in the dataset, is used to capture the wealth status of the family.

Data Analyses

The survey data used in this study has an inherent multilevel structure: students nested within classes and classes nested within schools. One popular way to deal with hierarchical data is to use multilevel modeling, which generally requires a large number of groups for accuracy of estimates and high power of tests (Hox, 2010). Multilevel modeling is clearly not an appropriate method to use in this research since there are only three groups (schools) in the data. An alternative analytical strategy for hierarchical data is to use a fixed effects model by including a set of dummy variables for groups. This acts as a control for all unobserved factors related to location of school/neighborhood, and thus facilitates examination of the effect of parental labor migration on outcome variables.

As a starting point, I first showed simple descriptive statistics and conducted one-way analysis of variance (ANOVA) and Chi-square test to examine if the four groups of adolescents differed in any of the mediating and outcome variables. Generalized structural equation modeling, or more specifically generalized path analysis, was then used for a full-scale analysis of the direct and indirect effects of parental migration on transitioning outcome of their children. Path analysis is widely used for examining mediation effects because it allows researchers to analyze more complicated models with multiple independent and dependent variables (Cheung, 2007; Stage, Carter, & Nora, 2004).

I also relied on interview data to provide contextual understanding of children's experiences of parental migration and/or divorce, and to illustrate the nuance or underlying mechanism of the patterns revealed by statistical analyses.

RESULTS

Descriptive Statistics

Table 1 presents the descriptive statistics of the final analytical sample. As shown in Table 1, the majority of the adolescents have one or two parents who migrated to work. About 39.4% of adolescents are from non-migrant families, 22.6% from father-migrant families, 14.0% from mother-migrant families, and 24.0% from both-parents-migrant families.

Table 1. Educational Outcomes and Socio-Demographic Characteristics of Adolescents by Parental Migration Status

	N	Total (421)	Non-migrant (166)	Father-migrant (95)	Mother-migrant (59)	Parents-migrant (101)	Bivariate Test
Transitioning outcome	421						Pearson's chi-squared(df=6)=14.58*
% Leaving school		10.45	9.04	6.32	11.86	15.84	
% Going to vocational high school		21.38	15.66	28.42	30.51	18.81	
% Going to academic high school		68.17	75.30	65.26	57.63	65.35	
Chinese scores (0–120)	421	73.90 (14.21)	76.24 (12.62)	71.49 (15.67)	72.15 (15.09)	73.97 (13.73)	One-way ANOVA F statistic=2.77*
Math scores (0–120)	421	66.05 (25.81)	66.70 (26.43)	62.77 (24.33)	64.25 (25.83)	69.87 (25.72)	One-way ANOVA F statistic=1.38
Parental divorce (%)	410	10.73	4.88	7.61	20.69	17.71	Pearson's chi-squared(df=3)=17.68**
Values toward education (1–4)	409	2.81 (0.73)	2.78 (0.70)	2.94 (0.71)	2.63 (0.74)	2.85 (0.77)	One-way ANOVA F statistic=2.32†
Having more than a few books at home (%)	418	67.22	73.94	67.02	61.02	60.00	Pearson's chi-squared(df=3)=6.78†
Depressive symptoms score (1–5)	395	1.98 (0.76)	1.98 (0.73)	1.93 (0.70)	2.06 (0.82)	2.00 (0.83)	One-way ANOVA F statistic=0.36
Age	422	14.91 (0.71)	14.87 (0.67)	14.94 (0.71)	14.99 (0.62)	14.89 (0.68)	One-way ANOVA F statistic=0.57
Female (%)	421	50.36	51.81	47.37	47.46	52.48	Pearson's chi-squared(df=3)=0.86
Number of siblings	400	0.95 (0.62)	1.00 (0.58)	0.88 (0.51)	1.00 (0.72)	0.90 (0.72)	One-way ANOVA F statistic=1.01
Father's education	412						Pearson's chi-squared(df=6)=7.69
% Primary school and below		20.15	14.11	22.58	22.41	26.53	
% Middle school		49.27	52.15	45.16	51.72	46.94	
% High school and above		30.58	33.74	32.26	25.86	26.53	
Mother's education	407						Pearson's chi-squared(df=6)=3.64
% Primary school and below		31.70	30.67	27.66	29.63	38.54	
% Middle school		52.83	52.76	58.51	53.70	46.88	
% High school and above		15.48	16.56	13.83	16.67	14.58	
Family computer ownership (%)	414	45.89	50.31	42.55	41.38	44.55	Pearson's chi-squared(df=3)=2.24
Location of School	421						Pearson's chi-squared(df=6)=30.08***
% Township		16.63	16.27	12.63	10.17	24.75	
% County town		58.91	69.88	61.05	49.15	44.55	
% Town		24.47	13.86	26.32	40.68	30.69	

†p<0.1; *p<0.05; **p<0.01; ***p<0.001

While 75.3% of adolescents from non-migrant families transitioned to academic high school, only 65.3% of those from father-migrant families, 57.6% of those from mother-migrant families, and 65.4% of those from parents-migrant families managed to do so. Relatively more adolescents left behind by mother (11.9%) or by both parents (15.8%) discontinued schooling than did their counterparts from non-migrant families (9.0%) and father-migrant families (6.3%). Bivariate test shows that adolescents' transitioning outcome differs significantly by their parents' migration status (χ^2=14.58, *df* = 6, p<0.05). The differences in Chinese test scores by parental migration status are statistically significant, with non-left-behind adolescents at the top, followed by adolescents staying with neither parent, only mother, and only father. Parental migration status does not seem to make a difference in their children's math test scores.

Overall, about 10.7% of the adolescents are from divorced families. As expected, children from migrant families are more likely to have parents who have divorced by the time of survey. Less than 5% of children from non-migrant families have parents who have divorced, compared to about 7.6% of children from father-migrant families, nearly 21% of children from mother-migrant families and about 17.7% of children from parents-migrant families. Bivariate analysis confirms that there is a clear association between parental divorce and parental labor migration (χ^2=17.68, *df* = 3, p<0.01). As to the other potential mediating factors, parental migration status is associated with the scores on values toward education and book availability at home with marginal statistical significance, but has no effect of depressive symptoms score.

The mean age of adolescents is 14.9. Half of them are girls. The average number of siblings adolescents have is about 1. Among the fathers, 20.2% had primary education or less, 49.3% had junior high school education, and 30.6% had at least senior high school education. The fathers of children who are left behind by mother or both parents are less educated than the fathers of non-left-behind children and children left behind by fathers. The mothers, on average, have attained lower education, with 31.7% having only primary education or less and only 15.5% having high school education or above. The share of high school and above graduates is the highest among the mothers of children left behind by mothers (16.7%) and the lowest among the mothers of children left behind by fathers (13.8%). However, these differences in the educational attainment of fathers and mothers by parental labor migration status are not statistically significant. About 46% of adolescents reported that their families own a computer at home. To summarize, the four groups of adolescents do not differ significantly from each other in terms of demographic characteristics and family socioeconomic status.

On average, 16.6% of adolescents were studying in the township school, 58.1% in the county town school, and 24.5% in the town school. However, the composition of the four groups of children in each school is significantly different (χ^2=30.08, *df* = 6, p<0.001). The township school has the highest share of adolescents left behind by parents (24.8%), the county town non-left-behind adolescents (69.9%), and the town school adolescents left behind by mothers (40.7%).

The Association between Parental Labor Migration and Divorce

To understand to what extent parental migration leads to divorce and to control for potential confounding factors, I then conducted multivariate logistic regression analysis (Table 2). Model 1 is the baseline model, including only parental migration status as predictors. Model 2 adds parents' educational attainment, controlling for the child's gender as well. Model 3 further adjusts for the location of school, taking into account of heterogeneity between schools or neighborhoods.

Table 2. Odds Ratios of Logistic Regression on Parental Divorce

	Model 1	Model 2	Model 3
Parental migration status			
Non-migrant (ref.)			
Father-migrant	1.61	1.61	1.68
	(0.86)	(0.87)	(0.92)
Mother-migrant	5.09***	3.65*	4.07**
	(2.48)	(1.92)	(2.15)
Parents-migrant	4.20**	4.07**	4.40**
	(1.89)	(1.85)	(2.04)
Female		1.46	1.44
		(0.49)	(0.48)
Father's education			
Primary or below (ref.)			
Junior high		0.70	0.71
		(0.32)	(0.32)
Senior high and above		0.30†	0.27*
		(0.19)	(0.18)
Mother's education			
Primary or below (ref.)			
Junior high		1.47	1.43
		(0.72)	(0.69)
Senior high and above		5.82*	5.56*
		(4.02)	(3.85)
Location of school			
County seat school (ref.)			
Township school			0.90
			(0.42)
Town school			0.63
			(0.28)
Log pseudo likelihood	-131.12	-117.83	-117.29
Pseudo R-squared	0.062	0.092	0.097
N	410	398	398

Robust standard errors in parentheses.
†p<0.1; *p<0.05; **p<0.01; ***p<0.001

In the baseline model, we see there is almost no difference in the likelihood of parental divorce between children from non-migrant families and children from father-migrant families. Relative to children from non-migrant families, children of migrant mothers and children of migrant parents are 4-5 times more likely to have parents who have divorced. This remains to be the case in models 2 and 3, when gender, parents' education and the location of school were controlled.

Results from models 2 and 3 also suggest that father's education is negatively associated while mother's education is positively associated with the likelihood of parental divorce. Relative to children whose father received at most primary school education, children whose father had at least senior high school education are 73% less likely to have divorced parents. On the contrary, relative to children whose mother received at most primary school education, children whose mother had at least senior high school education are about 5.6 times more likely to have divorced parents. A

potential explanation for the gendered effects of educational attainment on the likelihood of divorce is that better educated women feel less restricted by the social stigma attached to divorce, have greater economic independence because of more job opportunities, and are more willing to opt for marital dissolution when marriage does not work out for them.

Son preference has persisted in China, as manifested in the skewed sex ratios at birth (Goodkind, 2011). Will having a female child increase the likelihood of parental divorce? A previous study has shown that, in China, the divorce risk of women who had one or two daughters without son is somewhat lower than that of women who had one son only or had two kids with at least one son (Zeng et al., 2002). However, the risk of divorce of women who had three or more daughters without a son was more than 2 times as high as that of those women who had three or more children with at least one son. In this study, although the odds ratio for female gender is greater than 1, suggesting the odds of parental divorce are higher for girls than for boys, it is not statistically significant.

It is possible that parental divorce might lead to parental migration rather than the other way around. For example, after the marital relationship falls apart, one party or both parties may turn to labor out-migration as a solution to the difficult situation or a way to start a new life. Taking this possibility of the reverse causal relationship into consideration, I checked the relative timing of parental migration and divorce. Among those cases with available information, the onset of parental migration was prior to parental divorce for a great majority. When I excluded the cases in which parental migration occurred after the parental divorce, the patterns reported in Table 2 remained unchanged. Again, when I only included the cases in which the onset of parental migration was prior to parental divorce in the analysis, I obtained similar results. These results were reported in Table S1 in the supplementary materials.

However, these robustness checks are not able to deal with the issue of selectivity. It could be that an omitted third variable, for example, marital problems and conflicts, drives both marital dissolution and labor out-migration. The information I have simply does not allow me to delineate a detailed process of the development of parental migration and marital relationship. I cannot claim that parental migration leads to divorce; instead, I can only highlight the significant and strong association between the two.

The qualitative data also point to the association between parental labor migration and marital dissolution. In the case of Tian, her mother has been doing migrant work since Tian was less than one year old. When Tian was about two or three years old, her parents got divorced. She talked about the delicate relationship between her father, herself, and her maternal grandma:

> But I don't go to [maternal] grandma's home often, because the reason my parents got divorced is that, my mom, um, she found an uncle [new partner] outside [the county]. So I know every time I visit my [maternal] grandma, my dad actually minds, though he said he does not mind.

In another case, Zhou's mother returned home from migrant work to take care of him when he was in Grade 7, while his father continued doing migrant work. Based on the two quotes below from Zhou and his grandfather, his parents apparently experienced marital crisis during this period when they were separated from each other and this led to their eventual divorce:

> They used to work in the same place; they started to work in different places since this year...My mom was taking care of me at home. Last year, my parents were having problems and they divorced, sort of. (Zhou)
> She likes to play mahjong/cards. Some guys often came to pick her up to play.
> My son was not happy. They divorced last year. (Zhou's grandfather)

It is worth noting that parental migration is not significantly associated with parental marriage dissolution for those from father-migrant families. The arrangement of the father doing migrant work while the mother stays at home is in agreement with the traditional gendered norms regarding labor division and thus may pose the least challenge to family structure and functioning among the three types of parental migration. In contrast, adolescents from mother-migrant and parents-migrant families are much more likely to live in divorced or step- families.

The Effects of Parental Migration and Parental Divorce on Transition to High School

To test the effects of parental migration on the outcome of adolescents' transition to high school and the potential mediating effects of parental divorce, value toward education, book availability at home, and depressive symptoms, I conducted and compared a series of nested models using generalized structural equation modeling. The results show that although book availability at home and depressive symptoms have direct effects on transitioning outcome (leaving school relative to going to academic high school), there is no significant indirect effect from parental migration to transitioning outcome through either of these two variables, largely due to a lack of the direct effect of parental migration on them.

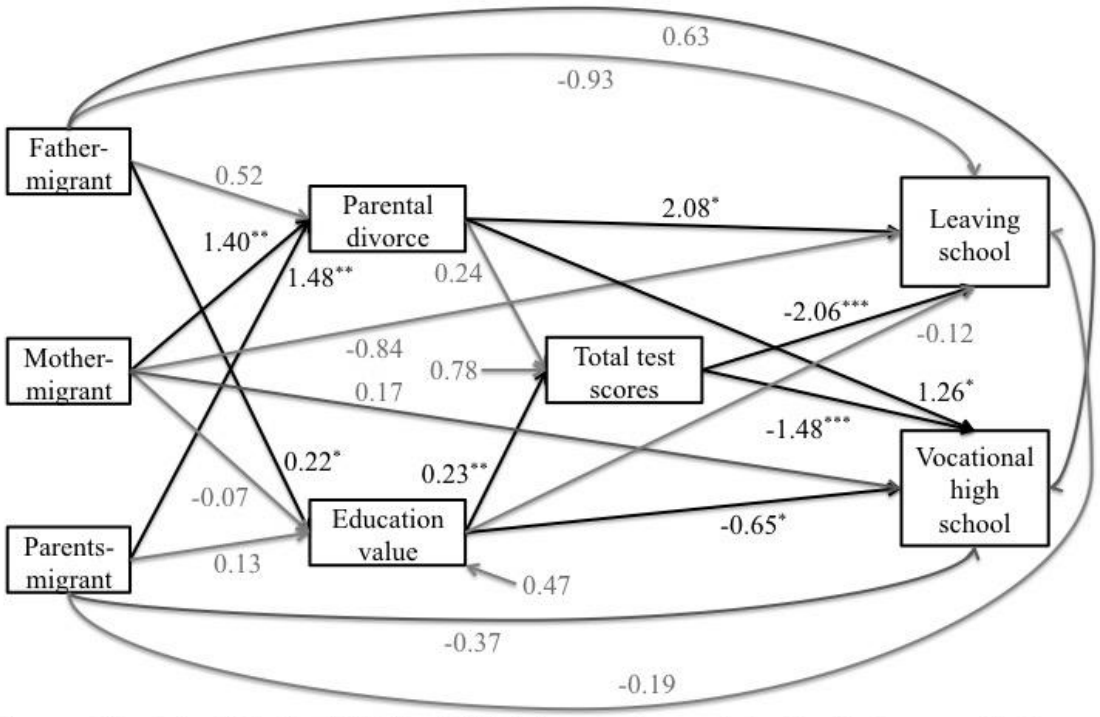
With regard to the other two mediating pathways (values toward education and parental divorce), I will now focus on a smaller and better-fit model briefly depicted in Figure 1 (for detailed results of the full model see Table S2 in the supplementary materials).

As shown in Figure 1, parental divorce has a significant direct positive effect on leaving school (unstandardized coefficient=2.08, $p<0.05$) and going to vocational high school (unstandardized coefficient=1.26, $p<0.05$), relative to going to academic high school. Education value has a significant direct negative effect on going to vocational high school relative to academic high school (unstandardized coefficient=−0.65, $p<0.05$).

On the other hand, consistent with what I presented with the logistic regression models on parental divorce, mother's migration (unstandardized coefficient=1.40, $p<0.01$) and parents' migration (unstandardized coefficient=1.48, $p<0.01$) is positively associated with the risk of parental divorce. Father's migration is positively associated with education value (unstandardized coefficient=0.22, $p<0.05$).

Not surprisingly, total test scores are strongly negatively associated with the likelihood of discontinuing schooling (unstandardized coefficient=−2.06, $p<0.001$) or going to vocational high school (unstandardized coefficient=−1.48, $p<0.001$), relative to going to academic high school. Value toward education is positively associated with total test scores (unstandardized coefficient=0.23, $p<0.01$), while parental divorce has no significant effect on test scores. Therefore, it is unlikely that parental migration and parental divorce would influence adolescents' transition to high school through affecting their test scores.

Figure 1. Path Diagram of the Effects of Parental Migration on Transitioning Outcome



Raw coefficients, * p<0.05; ** p<0.01; *** p<0.001. Reference category of educational outcome: academic high school. Controlled for book availability, depressive symptoms, gender, age, number of siblings, father's education, mother's education, family wealth status, and school location. Model fit information: N=404, AIC=3742.605, BIC=4154.751.

Combining these results, as Table 3 shows, there is a significant negative effect of mother's migration and parents' migration on adolescents' transitioning outcome through increased risk of parental divorce. In other words, when parental migration is associated with parental divorce, children seem to be most disadvantaged in terms of educational opportunity. The significant and substantial effects of parental divorce on children's transitioning outcome presented here are also validated by the qualitative data.

Parental divorce may cause severe psychosocial challenges to children, which may lead to reduced interest in schooling and weaker commitment to pursuing further education. Take Tian as an example, as I mentioned earlier, Tian's parents divorced when she was still very young and her father remarried when she was in primary school. She feels resentful towards her biological mother and does not get along well with her stepmother, who she claims favors her half-siblings over her; Tian is not close to her father either:

> My dad and I, (choking her tears back), we had nothing to say. I go home every Sunday, although sometimes I was alone with my dad, but most of these moments were filled with silence… When I was young, I felt envious of my classmates so much, I felt envious of my classmates so much, because (choking her tears back) when it rained, it got cold, and it's their mom or dad who brought umbrella for them, but me, every time, it's my grandma. When I was in Grade 6, in the class beside mine, there was a boy with the surname Chen; he seemed to know my situation. He told schoolmates that my parents were divorced. For this, I got into a fight with him. He was short, and in the same grade as me. I beat him and blood came out from his nose.

Table 3. Indirect Effects, Direct Effects, and Total Effects of Parental Migration on Transitioning Outcome (Unstandardized Coefficient) (Corresponding to the Model Presented in Figure 1)

Parental migration (ref=Non-migrant)	Through mediating pathway	Transitioning outcome (ref=academic high school)	Estimate	Standard error	Two-tailed P-value
Father-migrant	**Parental divorce**	**Leaving school**	1.09	1.22	0.373
Mother-migrant			**2.92**	**1.60**	**0.068**
Parents-migrant			**3.08**	**1.55**	**0.047**
Father-migrant		**Vocational high school**	0.66	0.76	0.385
Mother-migrant			**1.77**	**1.06**	**0.097**
Parents-migrant			**1.86**	**1.05**	**0.075**
Father-migrant	Parental divorce–test scores	Leaving school	-0.26	0.32	0.429
Mother-migrant			-0.69	0.55	0.210
Parents-migrant			-0.73	0.56	0.193
Father-migrant		Vocational high school	-0.18	0.23	0.428
Mother-migrant			-0.50	0.39	0.207
Parents-migrant			-0.52	0.40	0.189
Father-migrant	**Education value**	Leaving school	-0.03	0.08	0.748
Mother-migrant			0.01	0.03	0.777
Parents-migrant			-0.02	0.05	0.752
Father-migrant		**Vocational high school**	**-0.14**	**0.09**	**0.097**
Mother-migrant			0.04	0.08	0.573
Parents-migrant			-0.09	0.07	0.230
Father-migrant	**Education value–test score**	**Leaving school**	**-0.10**	**0.06**	**0.074**
Mother-migrant			0.03	0.06	0.570
Parents-migrant			-0.06	0.05	0.213
Father-migrant		**Vocational high school**	**-0.07**	**0.04**	**0.069**
Mother-migrant			0.02	0.04	0.570
Parents-migrant			-0.04	0.04	0.210
Father-migrant	Direct effects	Leaving school	-0.93	0.78	0.236
Mother-migrant			-0.84	0.83	0.316
Parents-migrant			-0.19	0.66	0.775
Father-migrant		Vocational high school	0.63	0.47	0.184
Mother-migrant			0.17	0.58	0.775
Parents-migrant			-0.37	0.51	0.466
Father-migrant	Total effects	Leaving school	-0.23	1.24	0.852
Mother-migrant			1.44	1.62	0.374
Parents-migrant			2.09	1.54	0.175
Father-migrant		Vocational high school	0.88	0.74	0.234
Mother-migrant			1.50	1.10	0.172
Parents-migrant			0.84	1.08	0.434

According to her form teacher, Tian was not doing very well in class and became weary of studying. Tian dropped out of school at the beginning of her last semester in middle school and started her life as a migrant worker. Similar to Tian, two others boys among the adolescents I interviewed, Zhou and Ling, whose parents were migrant workers and then got divorced, lost interest in studying and dropped out of school in their last semester of middle school.

Parental marital dissolution may also put economic stress on the family and the limited economic resources may force children to stay out of school. Li dropped out of middle school shortly after the beginning of her last semester. Her parents divorced when she was about six or seven years old. She has been living with her father who relies on motorcycle taxi service for a living, and she links her decision to stop going to school to her worries about the family's financial situation.

Another factor related to increased financial pressure is the larger sibling size as a result of parental remarriage. Larger sibling size means fewer resources available for each individual child's educational investment. For example, Tian's father remarried and had two more children with his current wife. He told Tian that if she did not make it to the best academic high school in the county after the High School Entrance Examination, there would be no further schooling for her. It is not hard to imagine that financial concern is thus part of the reason that Tian discontinued her schooling.

The qualitative data seem to suggest that insufficient economic resources may affect girls more than boys. Since sons but not daughters carry on the bloodline of the paternal family, it is possible that daughters may receive less educational investment than sons from divorced parents. In the cases of Li and Tian, if they had been boys, they might have felt differently about their fathers' commitment to financially supporting their education.

The results also show a marginally significant positive effect of father's migration on educational opportunities through enhanced value toward education. Father's migration decreases the relative likelihood of going to vocational high school instead of academic one via strengthening education value. Moreover, father's migration is shown to decrease the likelihood of leaving school or going to vocational high school relative to going to academic one through influencing education value that in turn affects test scores. These results suggest that the transmission of education value generates some protective effects of keeping adolescents in school.

Table 3 further reveals that in addition to those indirect effects mediated through parental divorce and education value, parental migration does not exert a significant direct effect on adolescents' transition to high school. Overall, the total effects of parental migration on transitioning outcome tend to be negative (estimated coefficients are positive because the reference category is the highest level) in the case of mother-migrant and parents-migrant families, although they are not statistically significant.

DISCUSSION

In this research I examined the consequences of parental migration for rural Chinese adolescents' educational outcome in their transition from middle school to high school. Studies on internal labor migration in China have revealed that migrant workers and their remaining family members are trying to maximize their economic and social security through flexible household strategies, such as division of labor and collaboration between genders, generations, and households, and circular movements between their places of work and the home community (Fan, 2009; Fan & Wang, 2008). Under the structural and social constraints of China's urban-rural bifurcation, many migrant parents,

in their efforts bettering their children's future prospects, are physically absent from their children's daily lives for years.

Contrary to what migrant parents may have hoped, the results suggest no overall beneficial effects of parental migration on adolescents' transition from middle school to high school. Specifically, though the effect of parental migration on transition to high school through social remittance pathway (value toward education) is positive, it is only marginally significant for adolescents in father-migrant families. Different from the theoretical predictions, parental migration is not associated with greater book availability at home. This might be due to that migrant parents may not have enough time to translate their greater economic resources into more books at home by visiting bookstores and purchasing books. Also, parental migration does not negatively affect educational outcome via worsening psychological wellbeing, since left-behind adolescents do not differ significantly from their non-left-behind counterparts as measured by depressive symptoms in this study. This could be due to the role of extended family members in caring and supervising adolescents in the absence of parents, and the fact that middle school adolescents in rural China spend a lot of time on campus studying, socializing, and living with peers and being closely supervised by teachers.

Most importantly, the results show that mother's migration and parents' migration increase the likelihood of leaving school or going to vocational high school relative to going to academic high school via increased chances of parental divorce. On one hand, adolescents from mother-migrant and parents-migrant families are 4 times more likely to experience parental divorce, compared to adolescents whose parents are not migrants. On the other, parental divorce greatly increases the risk of leaving school or going to vocational high school relative to enrolling in academic high school.

Adolescents in father-migrant families do not differ from their counterparts in non-migrant families in the likelihood of experiencing a parental divorce. This is probably because the arrangement of father being a migrant worker and mother staying at home is consistent with the traditional gendered division of labor and, thus, least disruptive among the three types of parental migration with regard to marital relationship dynamic and family functioning.

Analysis of the qualitative data reveals that parental divorce has a long-term negative impact on adolescents with regard to their educational outcomes. Firstly, adolescents of divorced parents are more likely to be psychosocially disturbed and to lose interest in schoolwork and further education. Secondly, parental divorce may be associated with decreased economic resources available for adolescents' educational investment. Thirdly, parental remarriage often leads to an increase in siblings for the adolescent and thus more competition for family resources, including those that support education. The evidence also suggests that the effect of parental divorce on educational outcomes may differ by gender: daughters are likely to receive less educational investment than sons in divorced families.

However, the mediating effects of parental divorce between parental labor migration and adolescents' transition to high school are likely to be overestimated to some extent due to omitted variable bias. I acknowledge the possibility that in certain cases, the preexisting marital problems or other unobserved characteristics might cause both divorce and labor out-migration. Although a causal relationship between parental migration and parental divorce cannot be established in this study, the results do suggest a strong association between the two, as well as a substantial negative impact of parental divorce on children's educational outcome. These findings reveal the need to pay greater attention to parental marital instability as a potential pathway mediating for the impact of parental migration on children's outcomes. In future research, it will also be important to investigate the underlying mechanisms between individual labor migration and marital instability in rural China.

Given the massive scale of internal labor migration accompanied by rising divorce rates, Chinese policymakers should give special attention to the implication of these social trends for the wellbeing of left-behind children in divorced families.

This research adds to the literature on migration and left-behind children by examining mediating mechanisms of the effect of parental migration and highlighting the potential role of parental divorce in linking parental migration with children's educational wellbeing. Are left-behind children from divorced families double victims of parental migration and parental divorce? The answer to this question, based on the findings of this study, is "Partially yes". Parental migration is harmful to the educational wellbeing of left-behind children when it is associated with parental divorce. Net of the effect of parental divorce, however, left-behind adolescents are doing as well as their non-left-behind counterparts. And as suggested by the overall nonsignificant effect of parental migration on children's educational wellbeing, other protective effects such as greater economic resources or involvement of extended family members and the school may counterbalance some negative effects of parental divorce.

This research has several limitations. The most general issue is that the results are based upon small, non-representative data, rather than a large, representative national sample. The issue of generalizability invariably crops up in situations like this. However, by delving deeply into the mediating mechanisms through which parental migration affects children's wellbeing, the findings will be informative to many other similar migrant-sending communities across rural China. Another problem is that the time-span of the data collection is limited. It would have been ideal to have longitudinal data covering a longer period of these adolescents' lives to better deal with the selectivity issue in linking parental migration with parental divorce. Moreover, due to missing information, I was not able to examine the potential economic benefits in a better way.

These limitations are offset at least partially by the richness and triangulation of the data itself. The data was collected using both survey and interview methods with multiple sources, including adolescents, parents, grandparents, and other key figures such as caregivers and teachers. Overall, the data was valuable and rich for advancing our theoretical understanding concerning the pathways of how parental labor migration affects adolescents' educational achievement in a migrant-sending community of central China. The disadvantages of adolescents from divorced families in terms of educational outcomes have profound implications for the life chances of rural children and their families, and social inequality in China as a whole. Social researchers and policy makers should pay attention to the social costs of massive labor migration and discriminatory urban development borne by rural families.

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Table S1. Odds Ratios of Logistic Regression on Parental Divorce, Robustness Check

	Excluding the cases of migration after the divorce occurs	Including only the cases of migration before the divorce occurs
Parental migration status		
Non-migrant (ref.)		
Father-migrant	1.41	4.29†
	(0.81)	(3.74)
Mother-migrant	4.04**	8.06*
	(2.11)	(7.15)
Parents-migrant	3.71**	8.65**
	(1.75)	(6.71)
Female	1.71	3.84*
	(0.60)	(2.24)
Father's education		
Primary or below (ref.)		
Junior high	0.64	0.71
	(0.29)	(0.49)
Senior high and above	0.27†	0.35
	(0.18)	(0.32)
Mother's education		
Primary or below (ref.)		
Junior high	1.37	0.80
	(0.67)	(0.53)
Senior high and above	4.56*	3.55
	(3.30)	(3.28)
Location of school		
County seat school (ref.)		
Township school	0.90	1.60
	(0.45)	(1.00)
Town school	0.70	0.67
	(0.31)	(0.43)
Log pseudolikelihood	-111.96	-63.29
Pseudo R-squared	0.088	0.159
N	395	377

Robust standard errors in parentheses.
†p<0.1; *p<0.05; **p<0.01; ***p<0.001

Table S2. Estimated Path Coefficients of Generalized Structural Equation Modeling on Transitioning Outcome

	Coefficient	Standard error
Transitioning outcome=leaving school		
Parental migration status (ref=Non-migrant)		
Father-migrant	-0.93	0.78
Mother-migrant	-0.84	0.83
Parents-migrant	-0.19	0.66
Standardized total test scores	-2.06***	0.40
Parental divorce	2.08**	0.81
Values toward education	-0.12	0.38
Having more than a few books at home	-1.29*	0.56
Depressive symptoms score	0.94**	0.32
Female	-1.33*	0.63
Age	-0.05	0.38
Number of siblings	1.05**	0.40
Father's education (ref=Primary or below)		
Junior high	-1.16†	0.69
Senior high and above	-1.69†	0.96
Mother's education (ref=Primary or below)		
Junior high	0.11	0.66
Senior high and above	0.69	1.01
Family computer ownership	-0.28	0.60
Location of school (ref=county seat town school)		
Township school	0.76	0.80
Town school	2.00**	0.65
Constant	-3.22	5.99
Transitioning outcome=vocational high school		
Parental migration status (ref=Non-migrant)		
Father-migrant	0.63	0.47
Mother-migrant	0.17	0.58
Parents-migrant	-0.37	0.51
Standardized total test scores	-1.48***	0.25
Parental divorce	1.26*	0.58
Values toward education	-0.65*	0.27
Having more than a few books at home	-0.23	0.40
Depressive symptoms score	0.40†	0.24
Female	0.40	0.41
Age	-0.09	0.27
Number of siblings	0.39	0.31
Father's education (ref=Primary or below)		
Junior high	-0.44	0.49
Senior high and above	-0.48	0.59
Mother's education (ref=Primary or below)		
Junior high	-0.54	0.43
Senior high and above	0.21	0.65
Family computer ownership	0.34	0.40
Location of school (ref=county seat town school)		
Township school	1.69**	0.52
Town school	2.38***	0.46
Constant	-0.45	4.33

Standardized total test scores		
Parental divorce	0.24	0.16
Values toward education	0.23***	0.07
Having more than a few books at home	0.03	0.11
Depressive symptoms score	-0.08	0.07
Female	0.17	0.10
Age	-0.13†	0.07
Number of siblings	-0.13	0.08
Father's education (ref=Primary or below)		
Junior high	0.21	0.13
Senior high and above	0.43**	0.16
Mother's education (ref=Primary or below)		
Junior high	-0.08	0.11
Senior high and above	-0.43*	0.17
Family computer ownership	-0.03	0.11
Location of school (ref=county seat town school)		
Township school	-0.07	0.14
Town school	-0.48***	0.12
Constant	1.60	1.14
Parental divorce		
Parental migration status (ref=Non-migrant)		
Father-migrant	0.52	0.55
Mother-migrant	1.40**	0.54
Parents-migrant	1.48**	0.47
Female	0.37	0.36
Father's education (ref=Primary or below)		
Junior high	-0.35	0.44
Senior high and above	-1.31*	0.59
Mother's education (ref=Primary or below)	0.00	.
Junior high	0.35	0.45
Senior high and above	1.71**	0.59
Location of school (ref=county seat town school)		
Township school	-0.10	0.48
Town school	-0.46	0.45
Constant	-3.07***	0.60
Values toward education		
Parental migration status (ref=Non-migrant)		
Father-migrant	0.22*	0.09
Mother-migrant	-0.07	0.11
Parents-migrant	0.13	0.09
Female	0.21**	0.08
Age	0.02	0.05
Number of siblings	0.06	0.06
Father's education (ref=Primary or below)		
Junior high	0.20*	0.10
Senior high and above	0.29*	0.11
Mother's education (ref=Primary or below)		
Junior high	-0.10	0.09
Senior high and above	-0.15	0.13
Family computer ownership	-0.02	0.08
Location of school (ref=county seat town school)		
Township school	-0.21*	0.10
Town school	-0.17†	0.09
Constant	2.20**	0.84

Having more than a few books at home		
Female	-0.42†	0.25
Age	-0.01	0.17
Number of siblings	-0.07	0.19
Father's education (ref=Primary or below)		
Junior high	0.16	0.30
Senior high and above	0.83*	0.37
Mother's education (ref=Primary or below)		
Junior high	-0.19	0.28
Senior high and above	-0.59	0.43
Family computer ownership	0.83***	0.25
Location of school (ref=county seat town school)		
Township school	-0.76*	0.31
Town school	-0.60*	0.28
Constant	0.95	2.66
Depressive symptoms score		
Female	0.22**	0.08
Age	0.06	0.06
Number of siblings	0.06	0.07
Father's education (ref=Primary or below)		
Junior high	-0.09	0.11
Senior high and above	-0.10	0.13
Mother's education (ref=Primary or below)		
Junior high	-0.02	0.09
Senior high and above	-0.02	0.14
Family computer ownership	0.04	0.08
Location of school (ref=county seat town school)		
Township school	0.17	0.11
Town school	0.15	0.10
Constant	0.93	0.92
Variance (Standardized total test scores)	0.78***	0.06
Variance (Values toward education)	0.47***	0.03
Variance (Depressive symptoms score)	0.55***	0.04
N	404	

†p<0.1; *p<0.05; **p<0.01; ***p<0.001