Parents' Migration and Children's Subjective Wellbeing and Health: Evidence from Rural China

KEY WORDS: CHINA, MIGRATION, LEFT BEHIND, CHILDREN, SUBJECTIVE WELLBEING, HEALTH.

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Abstract: This study examines differences in children’s subjective wellbeing and health across the full range of family structures that have emerged in China’s rural areas because of parental labour migration. It uses original cross-sectional survey data collected in 2010 in Anhui and Jiangxi provinces from children aged 9-17 years, as well as from their teachers and guardians (N=992). The results indicate no significant difference between ‘left behind’ children and other children for satisfaction with life events. However, the results do demonstrate that left behind children fare worse than children who live with both parents for behaviour at school, confidence in the realisation of future goals, loneliness and health. The results further reveal that who migrates matters for children’s wellbeing. Specifically, children with two migrant parents fare worse than children with only one migrant parent for several dimensions of wellbeing including behaviour and loneliness. Meanwhile, the children of lone migrant mothers fare worse than all other children for selected measures, most notably health. Our analyses underscore the sensitivity of the results to the dimension of children’s wellbeing measured and to who provides the evaluation.

Introduction

Labour migration is central to how many people in low income countries provide for their families. Recently, migration studies scholars have highlighted the need to examine the implications of parental labour migration for children’s subjective wellbeing and health. They particularly note that compared with children who accompany their parents, the wellbeing of children who are ‘left behind’ is less well understood (Jordan & Graham, 2012; Toyota *et al*, 2007; Wen & Lin, 2012). Moreover, they point out that children who are left behind in circumstances of internal migration receive less scholarly attention than those who are left behind in circumstances of international migration (Lu, 2012). In this study, we examine the subjective wellbeing and health of children who have been left behind by their migrant parents in rural China, because in comparison with education, these aspects of children’s wellbeing are less well understood.

Existing research indicates that parents' migration potentially exerts positive and negative effects on children's subjective wellbeing (including behaviour and emotional wellbeing) and health. On the positive side, remittances can lift recipient families out of poverty (Jordan & Graham, 2012; Chen *et al*, 2009), with poverty itself being a factor that can impair parenting quality and compromise children's behaviour and emotional wellbeing (McLoyd, 1998). On the negative side, reduced parental availability may hinder the regular communication necessary for maintaining parent-child attachment security and for enabling children to internalise their parents' values, attitudes and role expectations, with adverse consequences for their behaviour and emotional wellbeing (Pottinger, 2005). Reduced parental availability may also lower standards of care, negatively affecting children's health (Smeekens, Stoebe & Abakoumkin, 2012).

A burgeoning body of Chinese language literature has overwhelmingly emphasised the negative effects of parents' labour migration on the different dimensions of left behind children's wellbeing (Tao & She, 2009; Wang & Dai, 2009; Ye *et al*, 2005). However, as some scholars observe, this Chinese language literature seldom compares the situation of children in migrant and non-migrant families (Wen & Lin, 2012: 123; Xiang, 2007: 186). Nor does it consider variations among migrant families by which parent(s) have migrated.

This article seeks to redress a lack of comparative research into the implications of parental labour migration for children's subjective wellbeing and health in China's rural regions. It does so by drawing on original cross-sectional survey data collected during Summer 2010 from children aged 9-17 years living in Anhui and Jiangxi, two agricultural provinces located in China's south interior, as well as from their teachers and guardians (n=992). The analysis explores differences for selected measures of wellbeing across a range of family structures: these include families where both parents have migrated, families where only the father has migrated, families where only the mother has migrated, families where both parents are at home and at least one parent is a returned migrant, and families where the parents have not migrated. These distinctions by the parents' migration status are crucial because few studies pertaining to rural China have examined the implications of which parent migrates

(Jordan & Graham, 2012) or the implications of parents' return migration for children's wellbeing.

Background

It is well-known that China's economic rise in the past quarter of a century has been fuelled by the labour of rural migrants. In 2012 there were an estimated 163.4 million rural migrants, which is approximately three times the figure in the early 1990s (China National Bureau of Statistics, 2012). As the number of migrant labourers has increased so too has the number of children whose parents have migrated without them. Data from the Sixth National Census conducted in 2010 reports that over 61 million children aged under seventeen years were left behind. Of these 'left behind' children 46.74 percent had both parents working away, 36.39 percent had a lone migrant father, and 16.87 percent had a lone migrant mother. Left behind children accounted for 37.7 percent of all rural children and 21.88 percent of all children in China (ACWF Research Group, 2013). Meanwhile, in interior provinces, including in Anhui and Jiangxi, more than half of rural children lived in families where at least one parent had migrated without them (ACWF Research Group, 2013).

Migrants from China's rural areas leave their children behind because as rural people, they are marginalised in the cities. This marginalisation is pronounced in relation to migrant children's access to schooling. Even though in 2006 a Revised Compulsory Education Law required municipal authorities to ensure that school places were extended to migrants' children, authorities have commonly used the household registration system, a legacy from China's planned economy era, to exclude outsiders. Consequently, many children who migrate with their parents attend substandard migrant-run schools or second-rate public schools. Additionally, migrant children encounter discrimination in their preparations for senior high and university entrance exams: they must sit their examinations at their registered place of residence but the curriculum varies across provinces (Xiang, 2007; Ye *et al*, 2005). Further aspects of marginalisation that prevent migrants from looking after their children in the cities include their long working hours, low pay, exclusion from social security schemes and poor quality accommodation.

During the late 2000s the problem of 'left behind children' attracted mounting public concern within China. This concern formed part of a wider urban middle class emphasis on stable family life that arose in response to growing anxieties about the country's bewildering social transformations (Xiang, 2007). As both an expression of and in response to these middle-class concerns, policy-makers called on different levels of government to 'Care for Left-Behind Children'. Accordingly, governments in several major labour exporting provinces adopted measures to assist migrant families in caring for their children within the rural areas. Most of these measures have been *ad hoc*, for instance, running special activities through schools.

However, in some localities, one notable measure has involved expanding weekday boarding school facilities (Murphy, 2014). The initial impetus for establishing the boarding schools was the decrease in class size that occurred under the influence of fertility limitation policies. Subsequently, during the 2000s, in an effort to consolidate resources, higher primary grades were transferred from village schools to larger centralised schools located in townships, usually at a distance from the students' homes. Once these boarding schools were in place, officials saw a role for them in ameliorating the perceived care deficits of 'left behind children' (Gong, 2005; Tao *et al*, 2009; Wan, 2009; Zhou, 2007).

Parents' Migration and Children's Wellbeing

The existing literature presents a mixed picture of the relationship between parents' migration status and children's wellbeing in China's rural areas. In some studies, children whose parents have migrated without them are found to exhibit worse behaviour, greater emotional disturbance and poorer health than children who live with both parents (Gao *et al*, 2010; Lou *et al*, 2008). Explanations include that remittances fail to compensate the children for the adverse effects of the parents' absence and that guardians experience difficulties in providing the children with good quality care.

Other studies report that the subjective wellbeing and health of children whose parents have migrated differ little from children whose parents are at home (Lee, 2011). One explanation is that substandard public goods and services affect all children in rural regions, regardless of their parents' migration status (Xiang, 2007). Another

explanation is that guardians, particularly grandparents, compensate or even overcompensate the children for their parents' absence (Lee, 2011). A further explanation is that the migrants' actions in using phone communications to care for their children across distance ensure that they are 'virtually present' in their children's lives (Lu, 2012).

Some international migration studies research distinguishes between the effects of maternal and paternal migration on children. It finds that maternal absence is associated with worse outcomes for children's wellbeing than paternal absence. For instance, some research from SE Asia reports that children in migrant families fare better than children in non-migrant families, possibly because international migration brings relatively large remittances. However, this research also reports that among children in migrant families, those in mother-only migrant families fare the worst (Yeoh & Lam, 2006). Specifically, when compared with children whose mothers are at home, the children of migrant mothers are found to have more emotional difficulties, lower levels of general happiness (Asis, 2006; Battistella & Conaco, 1996; Jordan & Graham, 2012) and a higher incidence of common illness (Asis, 2006; Batistella & Conaco, 1988).

Scholars argue that maternal migration is more disadvantageous to children than paternal migration because it disrupts established gendered roles including the role of the mother as the child's primary caregiver, and also causes stress within families (Jampaklay, 2006; Parreñas, 2005). Recently, however, the picture of children's relative disadvantage in families where the mother has migrated alone has been challenged by research showing that in some SE Asian countries, the children of lone migrant mothers have no greater likelihood of behavioural problems or emotional disorder than children who are accompanied by both their parents whereas the children of lone migrant fathers do (Graham & Jordan, 2011). This suggests a need for research into how country-based differences in gender norms interact with parental labour migration to affect different dimensions of children's wellbeing (Graham & Jordan, 2011).

Several Chinese and English language studies of left behind children in rural China likewise disaggregate children by their parents' migration status. However, as Jordan

and Graham observe, the China-specific literature seldom considers the effects of the migrant parent's gender on the children's wellbeing (Jordan & Graham, 2012). Instead, these studies compare two-parent migration and one-parent migration or else they identify whether the child is cared for by a relative carer or a non-relative carer (Fang *et al*, 2010). These studies also typically only sample from among left behind children so do not include children who live with both their parents as a control.

Studies which compare the wellbeing of children with two migrant parents and one migrant parent in a rural Chinese setting generally find that the former experiences worse wellbeing than the latter. For instance, one study reports that children with two migrant parents have lower levels of life satisfaction than children with one migrant parent, though there are no significant differences by the parents' migration status for academic satisfaction or general happiness (Su *et al*, 2013). Another study finds that children cared for by non-parent guardians have worse behaviour and poorer emotional wellbeing than children cared for by one parent. Additionally, the negative effects are more severe the younger the child's age at the time of the parents' initial departure (Fan *et al*, 2010).

A handful of studies conducted in rural China also explore the implications of maternal migration, paternal migration and two-parent migration for the children's wellbeing. These studies echo the international migration studies literature in demonstrating that maternal absence is associated with children's poorer wellbeing. For instance, one study finds that children who are separated from either both parents or from their mothers at a younger age have more symptoms for anxiety and depression than children who live with their mothers. Additionally, three years and seven years are the thresholds at which ages parental migration correlates with marked increases in negative impacts (Liu *et al*, 2009). Meanwhile, another study reports that children whose mothers have migrated alone are more likely to engage in unhealthy behaviours such as drinking and smoking and are the least engaged at school (Wen & Li, 2012).

Some literature offers insights into why in rural China the children of lone migrant mothers seem to fare worse for wellbeing than other children. Lou suggests that owing to entrenched gender norms whereby men do outside work and women look

after the home, when married women migrate leaving their husbands behind, they do so in special circumstances (Lou, 2004 cited in Xiang, 2007). Other researchers' analyses cast light on these special circumstances. Specifically, they explain that these families often experience inherent vulnerability, reflected for instance in their lack of external support and weak internal cohesion (Duan & Wu, 2009; Wen & Lin, 2012). Meanwhile, Lou also notes that the migration of married women creates intense psychological pressures for their husbands (Lou, 2004, cited in Xiang, 2007). Hence, in these families, both intrinsic strains and migration-exacerbated strains may impair the at-home fathers' capacity to care for their children.

Yet other research conducted in China's rural regions compares children with lone migrant fathers and children who live with both their parents. This research finds that children with lone migrant fathers display more behavioural problems and emotional difficulties than children with two at-home parents (Leng & Park, 2010). Explanations include the reduced parental input arising from the increased demands on the at-home mothers' time and the absence of the parent who in Chinese family culture is often responsible for discipline and homework supervision (also Lee, 2011).

The literature also offers some limited analysis of the wellbeing of the children of returned migrants. Specifically, one study from a rural Chinese county reports that the children of returned migrants exhibit more behavioural problems and worse emotional wellbeing than children cared for by relatives. The authors attribute this finding to the duration of the returned migrant parents' previous absences which on average are longer than those of the current migrant parents (Fang *et al* 2010).

In sum, the literature for China's rural regions indicates the existence of important correlations between parents' migration status and children's subjective wellbeing and health. However, the implications of parent's migration status for children's wellbeing have not yet been explored across the full range of family structures that have emerged. The present study undertakes such an exploration.

The Data and Variables

The survey for this study originally comprised 1010 children, but owing to incomplete data, the final effective sample was 992. The sample was drawn using a multi-stage,

stratified design with random sampling at each stage. In the first stage, we selected Anhui and Jiangxi, two provinces from among the top five provinces with the largest number of rural out-migrants. In the second stage, we randomly selected four prefectures from the 27 prefectures in the two provinces, 2 of 16 in Anhui and 2 of 11 in Jiangxi. In each prefecture, one county was randomly selected, and then from within each county two townships were randomly selected.

In each township, the method for selecting the schools depended on local conditions. In Jiangxi there was only one primary school in each township so these were chosen. In Anhui school consolidation had proceeded at a slower pace so in each township there was a mix of both township-based primary schools and village-based primary schools. In the Anhui counties, we asked the education bureaus for a list of all primary schools in the relevant townships as well as a breakdown of the number of students attending the township-based and the village-based primary schools. We then drew our sample to reflect the ratio of children in the township and village-based primary schools. As the township junior high schools were the only junior high schools in each township, we included these schools in the sample. Once the schools had been chosen, classes and students from grades 4, 6 (primary school) and 8 (junior high school) were randomly selected.

Sampling within the schools was assisted by the nationwide policy to "Care for Left-Behind Children". Under this policy, schools are required to maintain records of which children's parents have migrated. The records contain information on the parents' migration status at the start of term. These records enabled us to sample proportionately from among left behind children and children living with both their parents depending on the ratio in each class. The records did not indicate the parents' duration of absence, but since most had been away for at least a year, we retrospectively incorporated this minimum duration as the criteria for being considered 'a migrant'.

Independent Variables

The principal independent variable in this study is the parents' migration status. We divided the children of migrants into 'both parents have migrated'; 'only the father has migrated'; and 'only the mother has migrated'. We also divided the children who

lived with both their parents into the subcategories of 'at least one parent is a returned migrant' and 'parents are non-migrants'. The subcategory of 'non-migrants' covers parents who have not migrated at any time after the surveyed child started school.

Additional independent variables pertain to the children's socio-demographic characteristics. These include the child's gender; whether the child is a primary school student (in our sample, 9-11 years) or a junior high school student (in our sample, 12-17 years); whether or not the child has a sibling; and their boarding status. Further variables pertain to the families' SES. These include the mother's age and years of schooling, the presence of grandparents, and family wealth measured by the guardian's estimate of household income per capita. We control for the mother's health status at the time of the sampled child's birth (health inheritance). We also include a township dummy as a control.[1]

Dependent Variables

The dependent variables in this study measure the children's subjective wellbeing and include indicators for their behaviour and emotional wellbeing as well as their health. The inclusion of measures for the children's behaviour, emotional wellbeing and health permits us to identify the occurrence of multiple kinds of advantage or disadvantage in the wellbeing outcomes among children in a given family structure. It additionally enables us to assess the sensitivity of our results to the dimension of wellbeing measured (Jordan & Graham, 2012; Wen and Li, 2010). At the same time, we also include measures for children's wellbeing based on both child reports and adult reports. This is so that we can compare and contextualise the results derived from the reports of different types of respondent. This comparison is valuable because many studies of children's wellbeing rely only on adults' evaluations. However, adults may be more likely than children to give responses which reflect their internalisation of mainstream family norms. Meanwhile, a sole reliance on children's perspectives may bring other limitations including a tendency to reflect only immediate circumstances (Jordan & Graham, 2012; Milkie, Simon & Powell, 1997; Wen & Li, 2010).

[1] As our data is collected from 8 townships, we added 7 township dummies. All statistical inferences are based on cluster-robust standard errors at the township level.

The first aspect of children's subjective wellbeing to be examined is behaviour. The children were asked to indicate whether or not they had broken school rules during the previous semester and whether or not they often fought or lost their temper with others. Their responses to these two questions were coded as 'yes' or 'no'. Teachers were also asked whether or not each sampled child often fought with classmates and their responses were likewise coded as 'yes' or 'no'.

Next, we obtained measures for the children's emotional wellbeing. One measure involved asking the children how often they felt that: 'Events in my life are satisfactory' (*shunxin ruyi*). The responses of 'seldom' and 'never' were recoded as 'No, I do not feel that events in my life are satisfactory' while 'sometimes', 'frequently' and 'always' were recoded as 'Yes, I feel that events in my life are satisfactory'. Another measure was obtained by asking the children: 'Do you feel that your life goals can be achieved'. The response of 'definitely yes' was recoded as 'yes' while the responses of 'not necessarily', and 'definitely no' were recoded as 'no'. A further indicator was measured by asking the children to rate on a scale of one to five how often they felt lonely. Responses of 'never' and 'seldom' were recoded as 'does not feel lonely' while responses of 'sometimes', 'frequently', and 'always' were recoded as 'yes, feels lonely'. Guardians were also asked to evaluate how often each sampled child felt lonely, and again, responses of 'never' and 'seldom' were recoded as 'does not feel lonely' while responses of 'sometimes', 'frequently' and 'always; were recoded as 'yes, feels lonely'.

Health was measured by asking the children to recall symptoms that they had experienced in the six months prior to the survey. The children were invited to select symptoms from a list that included: 1.breathing difficulties 2. extreme fatigue, faintness or weakness 3. fever 4. headaches 5. persistent coughing and 6. insomnia owing to discomfort. The children were then classified as having experienced either three or more symptoms or fewer than three symptoms. Meanwhile, the children's guardians were asked to evaluate the children's health over a six month period using a scale of 'above average', 'average' or 'below average'. Responses were then recoded so that children who were rated by their guardians as 'above average' or 'average'

were classified as ‘healthy’ and those who were rated as ‘below average’ were classified as ‘not healthy’.

Statistical Methods and Model Specification

We examined our cross-sectional survey data using Multivariate Logistic Regression (a logit model). Multivariate Logistic Regression is the most suitable method for analysing data that takes the form of discrete binary variables. In this study all measures of the children’s wellbeing were standardised as discrete binary variables to enable comparison.

The Logit Regression Model is set out below:

$$\mathrm{Prob}(\mathrm{Wellbeing} = 1) = 1 - \mathrm{F}(-\beta'\mathrm{x}) = \frac{\exp(\beta'\mathrm{x})}{1 + \exp(\beta'\mathrm{x})}$$

While

$$\mathrm{F}(-\beta'\mathrm{x}) = \frac{\exp(-\beta'\mathrm{x})}{1 + \exp(-\beta'\mathrm{x})} = \frac{1}{1 + \exp(\beta'\mathrm{x})}$$

In this equation, x represents the matrix of the explanatory variables that pertain to the children’s wellbeing while $\mathrm{x} = (1,\ \mathrm{M},\ \mathrm{C},\ \mathrm{F})$ represents the variation in the explanatory variables. The key independent variable is parents’ migration status (M) while other control variables include the children’s characteristics (C) and the family’s socio-economic status (F). For each explanatory variable we compute the odds ratio, $\exp(\beta)$, as well as the marginal effect ‘β’, though for reasons of space, in the tables we report only the former.

This study’s use of a logit regression model has both limitations and strengths. The principal limitation is that the analysis cannot isolate the impact of migration on the children’s wellbeing from other factors. Specifically, variations in family characteristics could explain not only the parents’ migration decisions but also variations in children’s wellbeing. A strategy to control for this potential endogenity

involves identifying an instrumental variable, that is, a factor which is exogenous to the families that can also control for the family characteristics that may affect the parents' migration decisions and the children's wellbeing.

Yet, as other scholars note, identifying an appropriate instrumental variable is extremely difficult, and this difficultly is compounded when, as in the present study, the main independent variable of the parents' migration status contains subcategories, thereby creating a need for several different instrumental variables (Bennett *et al*, 2013). For this reason, we have not been able to control for potential endogenity. This limitation notwithstanding, our analysis still enables us to identify associations between parents' migration status and children's subjective wellbeing. Hence, our study offers insights that can inform future research.

Results:

Descriptive Statistics:

Table 1 shows that of the 992 children in our sample, 24.5 percent (n=243) have migrant fathers, 2.72 percent (n=27) have migrant mothers, and 40.12 percent (n=398) have two migrant parents. A further 8.7 percent (n=89) live in families in which both parents are at home and at least one parent is a returned migrant. Meanwhile, 24.5 percent (n=242) live in families in which both parents are at home and have never migrated during the surveyed child's school career.

Even though the proportion of left behind children in our sample is higher than in studies conducted elsewhere in rural China, the breakdown of the migration status of the left behind children's parents is nevertheless similar (Chen *et al*, 2009; Duan & Wu, 2009; Lee, 2011; Lu, 2012; Wen & Li, 2012). Specifically, most children fall into the categories of either 'both parents have migrated' or 'only the father has migrated'. It is, however, noteworthy that the proportion of children in our sample with lone migrant mothers (2.72 percent) is far smaller than the national proportion (16.87 percent), a difference that most likely reflects the strong patrilineal family culture in the survey provinces.

[Table 1: The migration status of the children's parents in the Anhui and Jiangxi survey samples]

The children in our sample fall into the age band of 8 and 17 years, and the average age is 12 years. The gender breakdown of the sample is 54.94 percent (n=545) male, which corresponds with a wider imbalance in sex ratios in this age cohort. Approximately 39 percent (n=387) of children in our sample board at school during the week, a proportion that is higher than the national average of 21.82 percent for children aged 6-15 years (Ministry of Education, 2011). Moreover, the percentage of children who board increases to 48 percent when both parents have migrated and to 78 percent when only the mother has migrated. Therefore, the local availability of boarding facilities may enable some mothers to feel that they can migrate either alone or with their husbands. Conversely, boarding facilities may expand in response to local increases in parental outmigration.

The average age of the children's mothers in our sample is 38.3 years. Meanwhile, parents from migrant families are slightly younger than parents from non-migrant families and their education level is slightly higher. These differences reflect the generally better urban employment prospects of those who are younger and more educated. Table 2 provides more detailed information about the descriptive statistics in this study.

[Table 2: Descriptive Statistics for the Independent Variables]

Behaviour:

The first aspect of children's subjective wellbeing to be examined is behaviour. The results presented in Table 3, Models 1 and 2, indicate that when the children's own reports of rule-breaking and fighting are the measures there are no significant differences between 'left behind children' and accompanied children. Even so, the children of returned migrants are less likely to report rule-breaking than other children ($e\beta$ =.402, β =-.911).

However, when teachers' evaluations of fighting are the measure, children with two migrant parents are much more likely to fight than children with both parents at home ($e\beta = 1.555$, $\beta = .442$). Additionally, children with sole migrant fathers are more likely to fight than children who live with both their parents ($e\beta=1.490$, $\beta=.399$). The results for teachers' reports of the children's fighting echo other studies which suggest that both reduced parental supervision and the loss of the paternal figure correspond with more externalising behaviour among children (Leng & Lee, 2010; Lee 2011).

The discrepancy in the results for children's fighting based on self-reports (Model 2) and the teachers' reports (Model 3) may be because the former reflects the children's evaluations of their own interactions with their classmates whereas the latter reflects the teacher's comparison of the behaviour of each child in relation to the behaviour of other children in the class. Hence, the children who are rated by their teachers as being more prone to fighting may have lower expectations about what constitutes reasonable interaction than do their teachers. Additionally, it is noteworthy that boys manifest much worse behaviour than girls, independently of parental migration status.

[Table 3: The Behaviour of Children by Their Parents' Migration Status]

Emotional Wellbeing:

The second aspect of children's subjective wellbeing is emotional wellbeing. Our results suggest a mixed picture. Table 4, Model One, indicates no significant difference among children by their parents' migration status when the measure is the children's satisfaction with life events. This finding supports other scholars' observations that all rural children are disadvantaged by an institutionalised urban bias (Xiang 2007) and that family members do their best to compensate children for the migrants' physical absence (Lee, 2011; Lu, 2012). However, Model Two reveals that when compared with children who live with both their parents, left behind children are more likely to feel that their life goals cannot be realised. Moreover, children whose mothers have migrated alone are the most likely to feel that their life goals cannot be realised ($e\beta= 4.222$, $\beta=1.440$).

Table 4 further demonstrates that even though left behind children do not report feeling lonelier than other children (Model Three), they are nevertheless judged by their guardians as lonelier (Model Four). The discrepancy in the results obtained from children's reports and guardians' reports may be because our question to the children about how often they feel lonely is too general to be sensitive to the many dimensions of loneliness they experience. For instance, it is simpler than the Child Loneliness Index which Jia and Tian use to compare loneliness among children with two migrant parents and children with one migrant parent in a rural Chinese county. Even so, guardians' evaluations may resemble the Child Loneliness Index in that this measure likewise draws on observations of multiple facets of the children's emotional expression. This similarity could explain why our result for children's loneliness based on guardians' reports is consistent with Jia and Tian's finding that children with two migrant parents are lonelier than children with one migrant parent (Jia & Tian, 2010).

Our results also indicate that children with lone migrant fathers are more likely than children with lone migrant mothers to be judged as lonely. This difference between the children of lone migrant fathers and lone migrant mothers may be because at-home mothers are more attuned to their children's loneliness than at-home fathers. It may also be because the at-home mothers' are more likely to project their own sense of loneliness on to their children while at-home fathers may wish to present themselves and their children as coping fine in the absence of the mother (two migrant parents: $e\beta= 1.514$, $\beta=0.415$; father-only out $e\beta= 1.337$, $\beta=0.291$; results for mother-only out are not significant). Our results additionally identify variables other than parental migration status that correlate with guardians' evaluations of the children's loneliness. For instance, children with siblings are less lonely than singletons ($e\beta=.794$, $\beta=-.231$), while junior high school students are lonelier than primary school students ($e\beta=1.296$, $\beta=.259$).

[Table 4: The Emotional Wellbeing of Children by Their Parents' Migration Status]

Health:

The final aspect of children's wellbeing to be examined is health. Table 5, Model One, shows that left behind children are more likely to report experiencing at least three illness symptoms than children who live with both parents (two migrant parents: eβ= 1.613, β=.478; father-only migrant: eβ= 1.518 β=.417). Moreover, the children of lone migrant mothers are much more likely than all other children to report illness symptoms (eβ= 6.637, β=1.893).

[Table 5: The Health Status of Children by Their Parents' Migration Status]

Mindful of an existing literature which suggests that in rural China mother-only migrant families have inherent vulnerabilities, we disaggregated our survey data to look at health-related vulnerability across the differently structured families. Our breakdown of data indicates that mother-only migrant families are particularly afflicted by poor health. For instance, in our sample, nearly two thirds of the mother-only migrant families have a member who has incurred a major illness after 2005 compared with forty percent of other families. Meanwhile, in mother-only migrant families, expenditure on medical expenses since 2005 is over 35,000 *yuan* compared with approximately 22,000 *yuan* for other families. Additionally, in mother-only migrant families, debt for medical costs since 2005 is nearly 16,000 *yuan*, approximately one third more than the sum incurred by other families.

In Table 5, Model Two, we further examine the guardians' evaluations of the children's health across the differently structured families. Our results show that guardians in migrant families do not differ from guardians in non-migrant families in their evaluation of the children's health. It is potentially worrying that in circumstances of parental migration, guardians appear to underreport the children's experience of poor health. The discrepancy in the results derived from the children's reports and the guardians' reports may be because children are likely to be aware of their own experience of somatic illness whereas busy guardians may not notice, especially if the symptoms are relatively minor. Children may also conceal their illness from their carers so as not to worry them. Moreover, as has been observed in other socio-cultural settings, left behind children may somatise their emotional distress (Smeekens, Stroebe & Abakoukin, 2012).

Our results further reveal that a number of variables other than parents' migration status correlate with children's health outcomes. For reasons of space, here we highlight only the results pertaining to the children's gender. Chiefly, our results indicate that boys experience significantly better health than girls (self-reports: $e\beta=.587$, $\beta=-.532$; guardian reports: $e\beta=.750$, $\beta=-.288$). This finding offers a valuable supplementary perspective on gender dynamics within rural families in the survey provinces.

Conclusion:

The present study has explored variation in children's subjective wellbeing and health across the full range of family structures that have emerged in China's rural regions because of parental labour migration. Our results indicate that even though children differ little by the parents' migration status for their satisfaction with life events, there are nevertheless significant correlations between parents' migration status and other measures of children's wellbeing. Specifically, left behind children fare worse than children in non-migrant families for several indicators of subjective wellbeing including teachers' reports of the children's behaviour, guardians' reports of the children's loneliness, children's reports of their confidence to realise their future goals, and children's reports of their health.

Our results also highlight the need for researchers to look at differences among 'left behind children' by each parent's migration status. One way that some scholars have done this for rural China is by comparing the wellbeing of children with one migrant parent and the wellbeing of children with two migrant parents. This approach has produced fruitful insights. Indeed, we echo several scholars in finding that children fare worse for some measures of wellbeing, for instance, behaviour and loneliness, when two rather than one parent has migrated.

Importantly, though, our study also demonstrates the need for researchers to disaggregate the category of 'children with one migrant parent' by the migrant parents' gender. Otherwise, when samples are drawn from China's rural regions, the results derived from any comparison will mostly reflect the circumstances of those children with lone migrant fathers. Meanwhile, the experience of children with lone

migrant mothers will be hidden. When we analyse dimensions of children's subjective wellbeing and health by the gender of the lone migrant parent, findings emerge not observed in the international migration studies literature or in the literature on internal migration in other country settings. Specifically, our results indicate that the children of lone migrant mothers express less confidence in their potential to realise future goals and they report substantially worse health than all other children.

A convincing explanation is that in China's rural south interior, lone mother migration contravenes the gender roles of the prevailing patrilineal family culture to the extent that it is an exceptional event. Hence, lone mother migration most likely indicates inherent family vulnerability in a way that it does not in some other counties such as Philippines, Thailand or Mexico. At the same time, we also note the applicability of the insight from the wider migration studies literature that when gender roles are relatively inflexible, mother-only migration may present particular challenges to family functioning which compromise children's wellbeing (Parreñas, 2005; Jordan & Graham 2012). Although the number of children in mother-only migrant families in our sample is small, our findings nevertheless warrant attention. [2] At the very least, they highlight a need for further research into the wellbeing of children with lone migrant mothers living in China's rural interior.

Our study also casts light on the wellbeing of children with returned migrant parents. Specifically, we find that children with returned migrant parents do as well for our measures of wellbeing as children with never migrated parents and they are also less likely than all other children to report rule-breaking at school. It could be that children whose parents have migrated without them desire family unity, and that once the parents' sojourn has ended, the children seek to gain their parents' approval and also enjoy a stronger emotional bond with them. Meanwhile, returnees may also be more attentive to their children's needs to compensate them for their previous absence.

[2] The logit regression estimator of "mother-migrant" may not be consistent because of the small sample size. Specifically, a sample size should be larger than 30, but our sample size of 27 is nevertheless close to 30. Also, if we drop the variable "mother-migrant" from our regression model, the results of other variables are almost unchanged, so our conclusions are still valid.

Our analyses additionally lend support to other scholars' observations that results are sensitive to the dimension of child wellbeing measured and to who evaluates (Jordan & Graham, 2012; Milkie, Simon & Powell, 1997). We thereby endorse methodologies for researching left behind children's wellbeing that incorporate both children's reports and other data sources (Jordan & Graham 2012, Wen & Li, 2010).

Overall, we contend that in China's rural interior, parents' labour migration interacts with inadequate welfare provisioning and patrilineal gender norms to affect family-based nurturing environments in complex ways, with implications for children's subjective wellbeing and health. Hence, we join other scholars in arguing for reforms to improve social protection for rural people and migrants in ways that overcome rural-urban bifurcation.

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