Published in final edited form as:

Scand J Psychol. 2015 August ; 56(4): 384–390. doi:10.1111/sjop.12232.

The Mental Health of Children of Migrant Workers in Beijing: The Protective Role of Public School Attendance

Qin Gao^a, Hong Li^b, Hong Zou^c, Wendi Cross^d, Ran Bian^e, and Yan Liu^f

^aSchool of Psychology, Beijing Normal University, Beijing, China, 100875

^bUniversity of Chinese Academy of Sciences, Beijing, China, 100190

^cSchool of Psychology, Beijing Normal University, Beijing, China, 100875

^dDepartment of Psychiatry, University of Rochester Medical Centre, Rochester, NY 14642-8409, USA

^eSchool of Psychology, Beijing Key Lab of Applied Experimental Psychology, Beijing Normal University, Beijing 100875, China

^fSchool of Psychology, Beijing Normal University, Beijing, China, 100875

Abstract

The present study aims to understand the mental health status of an understudied group of migrant children—children of migrant workers in China. A total of 1466 children from Beijing participated in the study that compared migrant children ($n = 1019$) to their local peers ($n = 447$) in public and private school settings. Results showed that overall, migrant children reported more internalizing and externalizing mental health problems and lower life satisfaction than local peers. However, public school attendance served as a protective factor for migrant children's mental health. The mental health status of migrant children attending public schools, including externalizing problems as well as friend and school satisfaction, was not different from local children. In addition, our data indicates that the protective effect of public school attendance for migrant children may be even more salient among girls than boys, and for younger children than older children.

Keywords

Children of migrant workers in China; externalizing problems; internalizing problems; life satisfaction; school settings

INTRODUCTION

In the late 1970s, a national scale rural-to-urban migration for job opportunities began and continues to be a significant social and economic phenomenon in China. Whereas the earliest waves of migration most often involved individual workers, an emerging feature has

Corresponding author: Ran Bian, PhD, School of Psychology, Beijing Key Lab of Applied Experimental Psychology, Beijing Normal University, No.19, XinJieKouWai St., HaiDian District, Beijing 100875, P. R. China, ranbian@bnu.edu.cn, (8610)58805302 (telephone and fax).

been whole-family migration, including children (Duan & Liang, 2004). According to the National Health and Family Planning Commission of China (2014), there were 245 million migrant workers in China, with 62.5% of them accompanied by their families. As a result, estimates are that the children of migrant workers comprise 36.28% of 0 to 17-year-old children in Beijing (All China Women's Federation, 2013).

Migration and migration-related processes are widely regarded as having an effect on the psychological health of children and adolescents (Bhugra, 2004; DuPlessis & Cora-Bramble, 2005; Fichter *et al.*, 1988; Stevens & Vollebergh, 2008). While the mental health of international migrant children has drawn increased research attention (Aguilera-Guzmán, de Snyder, Romero & Medina-Mora, 2004; Aronowitz, 1984; Guarnaccia & Lopez, 1998; Stevens & Vollebergh, 2008), our understanding of the mental health status of the rural-to-urban migrant children in China is limited (Wong, Chang, He & Wu, 2010; Zhang, Li & Liu, 2010). Previous research on the children of migrant workers in China has mostly focused on educational issues such as education rights, dropout rates, and educational consequences (Chen & Feng, 2013; Hu & Szente, 2010; Li *et al.*, 2010; Montgomery, 2012; Wang & Holland, 2011; Wu, Tsang & Ming, 2014). Only a few studies have been conducted on the mental health of this population (e.g., Chen, Wang & Wang, 2009; Guo *et al.*, 2012; Mao & Zhao, 2012; Wong *et al.*, 2010; Wu, Palinkas & He, 2011; Zhang, Li & Liu, 2010). The few studies that have compared the mental health status of migrant children with their local peers have generally shown that migrant children are at high risk of developing mental health problems such as higher depression, fewer social connections, and lower self-esteem (Chen, Wang & Wang, 2009; Mao & Zhao, 2012). In addition, Wong, Chang and He (2009) found that migrant children reported more depression and anxiety than diverse ethnic children in the US reported in overseas studies.

There are several limitations of these studies. First, because migrant families are usually of lower socio-economic status than local residents (Liang, Guo & Duan, 2008; Mao & Zhao, 2012), differences may be a reflection of socio-economic status rather than migrant status. A comparison between these two groups may need to control for socio-economic factors. Second, previous studies make no distinction among migrant children in terms of subgroups. For example, migrant children attending different types of schools—public schools or private migrant schools—may differ on a variety of variables including mental health. Comparisons that take into consideration school setting could provide a more in-depth understanding of migrant children's mental health (Liang, Guo & Duan, 2008). The reason that school setting may be important is that in China children of migrant workers tend to be excluded from public schools (which are more resourced) because of the Household Registration System (*hukou* system). The *hukou* system categorizes Chinese citizens into two types of residency status—rural and urban. Migrant families who hold rural residence status are regarded as temporary residents in the cities. Chinese public schools recruit students based on local residency, thus the children of migrant workers are not eligible for enrollment in the public schools. Parents can pay fees, however, to gain access to public school education for their migrant children—3,000–30,000 yuan (500 to 5000 US dollars) per year (Fleisher & Yang, 2003). Otherwise they have to send their children to very inexpensive, informal private schools run mostly by migrant workers exclusively for their children (Chen & Feng, 2013). Most of these private migrant schools do not receive

government subsidies because they are not officially approved. They are typically staffed with under-qualified teachers who teach fragmented curricula in poor facilities (Center for Chinese Agricultural Policy, 2009; Goodburn, 2009). Lai *et al.* (2009) reported that the school resources and teacher qualifications of migrant schools in Beijing are worse than those of the poorest rural public schools.

In addition, extensive research has demonstrated that school climate, of which teachers and physical environment are essential components (Thapa, Cohen, Higgins-D'Alessandro & Guffey, 2012), has a profound impact on students' mental health (Ruus *et al.*, 2007; Shochet, Dadds, Ham & Montague, 2006; Virtanen *et al.*, 2009; Way, Reddy & Rhodes, 2007). This finding strengthens the importance of considering school settings in studies of China's migrant children's mental health. In the present study we examine the mental health status of migrant children in public schools and private migrant schools compared to the mental health status of their local peers.

METHOD

Procedure

A multistage block sampling method was used as follows. (1) Four districts were randomly chosen from eight central districts of Beijing: Haidian, Xicheng, Chongwen, and Chaoyang. (2) A total of ten elementary and middle schools were randomly chosen from these districts, including four migrant schools with migrant students only, three public schools with local students only, and three public schools with both migrant and local students. (3) Given that migrant schools usually have classes from grade 1 to grade 8 and considering students' literacy level, two classes from each grade from grade 5 (approximate age 11 years) to grade 8 (approximate age 14 years) were randomly chosen ($n = 32$ classes). (4) Within each selected class, a total sampling method was used for a total of 907 migrant students from migrant schools. (5) For the two types of public schools—schools with only local students and “mixed” schools with combined local-migrant classes—one class from each grade from grade 5 to grade 8 of six schools was randomly chosen for a total of 24 classes with 12 classes from public schools with local students only and 12 classes from mixed public schools. A total of 773 students were selected from public schools.

A total of 1680 students were administered a paper and pencil survey (described below) in large groups during school hours. A total of 1466 volunteer students (including 1019 migrant students and 447 local students) aged 9–15 years¹ provided complete responses on the survey for an overall response rate of 87.3%. Parental consent to administer questionnaires to students was obtained at a parent-teacher meeting prior to administering survey questionnaires. The students were clearly informed of the study purpose before administration of the survey and had the choice to participate or not. Two research assistants were present during survey administration to assist students with comprehension if necessary and to respond to any questions. Graduate students majoring in counseling

¹Students in grade five to eight are typically 11–14 years old in China. In the present study, eight (8; 0.5%) participants were less than 11 years old, which is usually considered the minimum age for the use of self-report questionnaires. However, given that the literacy level of participants depends more on their grade level than chronological age, and excluding participant less than 11 years old did not change the significance of the variables, we included all participants in our analysis.

psychology from the Beijing Normal University volunteered to provide counseling service for participants if needed².

Questionnaires

We administered a questionnaire that included socio-demographic items such as participants' gender, age, migration status (migrant vs. local), and school (public school vs. private migrant school). Consistent with previous studies (Boyce, Torsheim, Currie & Zambon, 2006; Gao *et al.*, 2010; Mao & Zhao, 2012), children also reported on family socio-economic status by responding to items about the monthly family income (< 2000 yuan, 2000–6000 yuan, or > 6000 yuan), parents' education level (middle school or less, high school or professional school, or college or above), whether the family owns their apartment (yes or no), and whether they own a computer (yes or no).

Two self-report questionnaires³ measured participants' mental health. Behavioral and emotional problems were measured with the brief Chinese version of the Child Behavior Checklist (CBCL, Achenbach, 1991) revised by Chi and Xin (2003), which includes two subscales measuring externalizing and internalizing problems. The externalizing behavior problem subscale assessed behaviors such as defiance, impulsivity, disruptiveness, aggression, and antisocial features. The internalizing subscale assessed anxiety, depression, withdrawal, and somatic complaints. The 45-item measure used a 4-point Likert-type scale ranging from (1) "not like me at all" to (4) "exactly like me". The alpha coefficients in the current study for the externalizing subscale, internalizing subscale, and the total scale were .82, .87 and .93 respectively.

Life satisfaction was measured with the Chinese version of the Multidimensional Students' Life Satisfaction Scale (MSLSS; Huebner, 1994) adapted by Tian and Liu (2005), which examines students' satisfaction across five life domains: Family, Friends, School, Living Environment, and Self. The scale includes 40 items, which are scored on a 6-point scale ranging from (1) "strongly disagree" to (6) "strongly agree". The alpha coefficient in the current study was .90 for the full scale and between .78 and .85 for the subscales.

Analysis

Descriptive statistics of the socio-demographic variables were carried out along with comparison of socio-demographic characteristics among three groups—migrant children attending migrant school, migrant children attending public school, and local students (attending public school). MANOVA analyses examined the association between the dependent variables (externalizing and internalizing problems, life satisfaction) and the following independent variables: group, gender, age (categorized into 9–12 years and 13–15 years). Family socio-economic status indicators were entered as covariates. Analyses were conducted with SPSS 19.0.

²Since no participants expressed needs for further support, no children were actually counseled.

³The two questionnaires used in our study (Chinese versions of Child Behavior Checklist and Multidimensional Students' Life Satisfaction Scale) have been shown to be understandable for Chinese children in fifth grade or above (Chi & Xin, 2003; Hu, 2014).

RESULTS

Socio-demographic characteristics

Table 1 shows the socio-demographic information for our total sample and subgroups of participants—migrant children attending migrant school, migrant children attending public school, and local students. In our sample, 20.7% of migrant children attend public schools. Gender composition was similar for the three groups. The average age of local children was younger than both groups of migrants ($p < .001$) and the two groups of migrant children did not differ in age ($p > .05$). Even though the three groups significantly differed in terms of monthly family income and parents' education ($p < .001$), these indicators were dropped from further analysis because many participants either responded “don't know” or did not answer these questions (34.7% for family income, 10.9% for father's education, 13.7% for mother's education). In addition, migrant families were less likely to live in their own apartment or own computers ($p < .001$) than local peers. However, migrant children attending public schools were more likely to own computers than those attending migrant schools ($p < .001$), and these two groups did not differ in apartment ownership ($p > .05$).

Comparison of mental health status between migrant children and local peers

MANOVA analyses were conducted to investigate the impact of different variables on externalizing and internalizing problems and aspects of life satisfaction. Significant main effects for group, gender, age, and computer ownership (covariate) were found (Table 2). Boys reported more externalizing problems ($F = 18.964$, $df = 1$, $p = 0.000$) and lower school satisfaction ($F = 7.337$, $df = 1$, $p = 0.007$) than girls. Older children reported more externalizing problems ($F = 11.987$, $df = 1$, $p = 0.001$), lower family satisfaction ($F = 5.229$, $df = 1$, $p = 0.022$), and lower school satisfaction ($F = 7.874$, $df = 1$, $p = 0.005$) than younger children. Children whose families owned computers reported less internalizing problems ($F = 5.414$, $df = 1$, $p = 0.020$), higher family satisfaction ($F = 5.980$, $df = 1$, $p = 0.015$), and higher self satisfaction ($F = 12.421$, $df = 1$, $p = 0.000$) than those who did not.

Post-hoc multiple comparison tests (Fisher's Least Significant Difference test, Fisher, 1935) on group revealed that local children reported less mental health problems and higher life satisfaction than migrant children attending migrant schools. Migrant children attending public school also reported less mental health problems and higher life satisfaction (with the exception of family satisfaction) than migrant children attending migrant schools. Additionally, migrant children attending public schools and local children did not differ in externalizing problems, friend satisfaction, and school satisfaction.

MANOVA analyses also revealed significant interactions between group and gender (family satisfaction: $F = 3.257$, $df = 2$, $p = 0.039$; school satisfaction: $F = 4.196$, $df = 2$, $p = 0.015$), and group and age (self satisfaction: $F = 5.169$, $df = 2$, $p = 0.006$) (Figure 1a, 1b and 1c). Simple effects analysis revealed that for family and school satisfaction, the group effect was significant among boys (family satisfaction: $F = 23.33$, $df = 2$, $p = 0.000$; school satisfaction: $F = 22.65$, $df = 2$, $p = 0.000$) and girls (family satisfaction: $F = 29.32$, $df = 2$, $p = 0.000$; school satisfaction: $F = 3.01$, $df = 2$, $p = 0.050$). For self satisfaction, the group effects were also significant among younger ($F = 157.99$, $df = 2$, $p = 0.000$) and older children ($F =$

30.47, $df = 2$, $p = 0.000$). Results reported in Figure 1a and 1b suggest that the advantages for migrant children attending public schools over those attending migrant schools may be stronger for girls, Figure 1c suggested that the advantages may also be more salient for younger children.

DISCUSSION

This study is one of the few to investigate the mental health of children of migrant workers in China. Using self-report data, we compared positive (life satisfaction) and negative (externalizing and internalizing problems) aspects of mental health of children of migrant workers to their local peers, after controlling for socio-economic status (Wong *et al.*, 2010). In addition, we explored the differences between migrant children attending public schools and those attending private migrant schools.

Our results partially support that being male is associated with more mental health problems (Chen, Wang & Wang, 2009; Wong, Chang & He, 2009; Zhang, Li & Liu, 2010), and that age is positively correlated with mental health problems and negatively correlated with subjective well-being (Mao & Zhao, 2012; Wong, Chang & He, 2009; Wong *et al.*, 2010) for migrant and local children: boys reported more externalizing problems and less satisfaction with school than girls, and older children (13–15 years old) reported more externalizing problems and less satisfaction with both family and school than younger children (9–12 years old). Previous research found that higher family socio-economic status was associated with less self-reported depression among migrant and local children (Mao & Zhao, 2012) and higher general life satisfaction among migrant children (Wong *et al.*, 2010). Similarly, our results showed that computer ownership, an indicator of family socio-economic status, was associated with less internalizing problems and higher family and self satisfaction among migrant and local children. Taken together, our results partially supported the protective roles of being female, younger age, and high family socio-economic status in migrant and local children's mental health. Previous research has also reported that migrant children are at higher risk of developing mental health problems than local peers, but these studies did not take into account the possible effect of socio-economic status (Chen, Wang & Wang, 2009; Mao & Zhao, 2012). Our results suggest that, after controlling for socio-economic variables, migrant children indeed have poorer mental health than local peers.

This study makes unique contributions to the literature. We found that public school attendance is a protective factor in terms of migrant children's mental health. Despite the concern that attending the same school with local students may expose migrant children to more discrimination and unfair treatment (Guo, 2007), our results showed that migrant children attending public schools were better off than those attending private migrant schools in all aspects of mental health status except family satisfaction. Moreover, migrant children attending public schools did not differ from local peers on externalizing problems, friend or school satisfaction. The protective role of public school attendance on migrant children's mental health may be due to public schools' better education resources. Housed in abandoned storehouses or residential houses with inadequate instructional materials, overcrowded classes, and underqualified teachers, migrant schools cannot provide a nurturing or enjoyable study environment for students. High turnover of teachers in migrant

schools makes it extremely hard for migrant children to have stable and beneficial teacher-student relationships. In addition, compared to public schools' well-rounded curriculum, migrant schools usually focus solely on Chinese and mathematics. Very little attention is devoted to promoting the physical and mental health of the students (Goodburn, 2009).

School desegregation may also contribute to our findings. According to research on school segregation in the US, ethnic minority children attending mainstream schools with majority, white students display higher self-worth, and better social competence (Postmes & Branscombe, 2002). Conversely, students in segregated schools tend to perform less well and are more likely to drop out of school and engage in risky behaviors (Wells & Crain, 1994). The same effect may be relevant to our findings. Studying and living together with local urban children in public schools provides migrant children more opportunities to have contact with the host culture, which in turn facilitates their adaptation and assimilation. Children in migrant schools usually only have contact with people from rural areas (Yuan, Fang, Liu & Li, 2009), which may slow the assimilation process and contribute ongoing feelings of being "outsiders". Additionally, interaction between migrant and local children may help minimize possible misunderstanding and discrimination. Indeed, migrant children attending migrant schools felt more discrimination than those attending public schools (Lin, Fang, Liu & Lan, 2009).

Importantly, our findings showed that differences between the groups was not the same for all children. For example, the protective effect of public school attendance for migrant children were more noticeable among girls than boys, and younger children than older children. More studies, especially longitudinal studies, should continue to examine the effects of public school attendance on the mental health of migrant children of different gender and age over time.

Limitations and Contribution

This study has several limitations. First, we used child self-reported family ownership of their apartment and a computer as indicators of family socio-economic status. Although the comparison of these indicators between migrant and local children agreed with previous study using other indicators (e.g., family income, parents' education, and parents' occupation; Mao & Zhao, 2012), parents' report may be more reliable indicators of family socio-economic status. Second, children's self-reports of mental health status, especially externalizing and internalizing problems, may not agree with reports from other sources. Parent, teacher and student responses have been found to result in different levels of child mental health problem (Stevens *et al.*, 2003). Future studies may benefit from examining multiple informants of children's mental health. Third, since most migrant children were from rural areas of China (80.35% according to All China Women's Federation, 2013), including a rural non-migrant group in the study would have enhanced our understanding of migrant children's mental health. Future research could address this limitation by comparing children of migrant workers from Sichuan province to local peers, as well as non-migrant peers in rural Sichuan province.

Despite these limitations, the present study adds to an understanding of the mental health status of children of migrant workers in Beijing by examining school settings (public

schools, private migrant schools) and comparing positive and negative aspects of mental health with their local peers. Our findings have multiple implications for policy and practice. First, our results underscore the importance of opening the doors of public schools to migrant children. Although the State Council requires that local governments take responsibility for educating migrant children without additional fees (Research Group of the State Council of China, 2006), many official documents (i.e., a temporary residence permit, a migrant work permit, a population planning certificate) are required by local governments for the “approval permit for temporary schooling”, which prevents most migrant children from attending public schools (Goodburn, 2009). Therefore, policies that promote cooperation and coordination among different government departments are necessary to remove barriers and make public schools truly accessible to migrant children. At the same time, given that migrant schools are likely to remain for a period of time, the government should provide support and supervision to improve the quality of education in these schools. Third, our findings indicate that social service and recreation programs that offer opportunities for interaction between migrant children (especially those attending migrant schools) and local children may also help promote migrant children’s mental health. Overall, promoting the mental health status of the large population of migrant children in China requires changes in legal, educational and social systems.

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a The interaction between group and gender on family satisfaction

b The interaction between group and gender on school satisfaction

Figure 1.

The interactions between group and gender, and group and age on mental health status

Table 1
Comparison of Socio-demographic characteristics between migrant and local children (N=1466)

Characters	Total group	Migrant Children		Local Children (Public School)	Chi/F
		Migrant School	Public School		
No. of Students	1466	808	211	447	
Gender (Male; %)	54.9	54.7	53.6	55.9	0.349
Age (mean, SD)	13.0,1.5	13.3, 1.5	13.1, 1.4	12.5, 1.1	44.31***
Monthly Family Income (%)					335.4***
Under 2000 Yuan	37.1	47.0	36.5	19.5	
2000–6000 Yuan	18.6	7.9	21.8	36.2	
6000 above Yuan	9.7	1.5	2.4	28.0	
“Unknown” or no answer	34.7	43.6	39.3	16.3	
Father’s Education Level (%)					657.1***
middle school or less	55.8	76.1	64.9	14.8	
high school or professional school	15.8	13.4	16.6	19.9	
college or above	17.5	1.9	2.8	52.6	
“Unknown” or no answer	10.9	8.7	15.6	12.8	
Mother’s Education Level (%)					733.4***
middle school or less	59.1	79.6	67.3	18.3	
high school or professional school	11.1	6.1	15.2	18.3	
college or above	16.0	1.0	1.9	49.9	
“Unknown” or no answer	13.7	13.4	15.6	13.4	
Living in self-own apartment (Yes; %)	30.2	11.0	16.1	71.6	521.6***
“Unknown” or no answer	0.5	0.6	0	0.4	
Computer ownership (Yes; %)	36.0	12.4	33.2	80.1	573.5***
“Unknown” or no answer	0	0	0	0	

Notes:

* $p < .05$,

** $p < .01$,

$p < .001$

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Table 2
Means and standard deviations of externalizing and internalizing problem and life satisfaction

	Externalizing problems	Internalizing problems	Family satisfaction	Friend satisfaction	School satisfaction	Environment satisfaction	Self satisfaction
Group	9.226 ***	28.465 ***	11.130 ***	12.860 ***	8.891 ***	19.764 ***	50.477 ***
Migrant school migrants	1.77 ^a (0.41)	2.15 ^a (0.50)	4.17 ^a (1.04)	3.78 ^a (0.62)	3.74 ^a (0.58)	3.50 ^a (0.72)	3.92 ^a (0.87)
Public school migrants	1.67 ^b (0.43)	1.91 ^b (0.56)	4.28 ^a (1.13)	3.95 ^b (0.62)	3.92 ^b (0.53)	3.68 ^b (0.73)	4.50 ^b (0.82)
Local students	1.54 ^b (0.44)	1.73 ^c (0.58)	4.82 ^b (1.04)	4.10 ^b (0.53)	3.93 ^b (0.43)	3.94 ^c (0.60)	4.89 ^c (0.85)
Gender	18.964 ***	0.904	0.343	1.451	7.337 **	0.000	0.025
Boys	1.75 (0.45)	1.99 (0.57)	4.39 (1.06)	3.86 (0.63)	3.77 (0.56)	3.67 (0.69)	4.27 (0.96)
Girls	1.62 (0.40)	2.02 (0.56)	4.35 (1.11)	3.94 (0.59)	3.87 (0.52)	3.62 (0.75)	4.26 (0.96)
Age	11.987 ***	0.751	5.229 *	1.211	7.874 **	0.061	0.235
9–12	1.66 (0.43)	2.00 (0.56)	4.44 (1.07)	3.89 (0.64)	3.84 (0.54)	3.64 (0.73)	4.21 (0.99)
13–15	1.75 (0.44)	2.00 (0.57)	4.24 (1.12)	3.91 (0.56)	3.78 (0.55)	3.66 (0.69)	4.36 (0.91)
Living in own house	0.106	0.176	1.172	0.000	0.538	0.573	0.055
No	1.73 (0.43)	2.07 (0.54)	4.25 (1.08)	3.84 (0.62)	3.80 (0.56)	3.57 (0.73)	4.12 (0.93)
Yes	1.59 (0.43)	1.82 (0.59)	4.72 (1.03)	4.02 (0.57)	3.88 (0.48)	3.86 (0.64)	4.66 (0.96)
Computer ownership	2.911	5.414 *	5.980 *	0.425	2.945	0.439	12.421 ***
No	1.75 (0.42)	2.11 (0.53)	4.20 (1.05)	3.83 (0.62)	3.77 (0.58)	3.54 (0.73)	4.02 (0.89)
Yes	1.58 (0.44)	1.80 (0.57)	4.70 (1.08)	4.02 (0.57)	3.91 (0.46)	3.84 (0.64)	4.72 (0.92)

Notes: Standard deviations are in parentheses; numbers in bold are F values. Means marked by the same letter are statistically equal.

* $p < .05$,

** $p < .01$,

*** $p < .001$.