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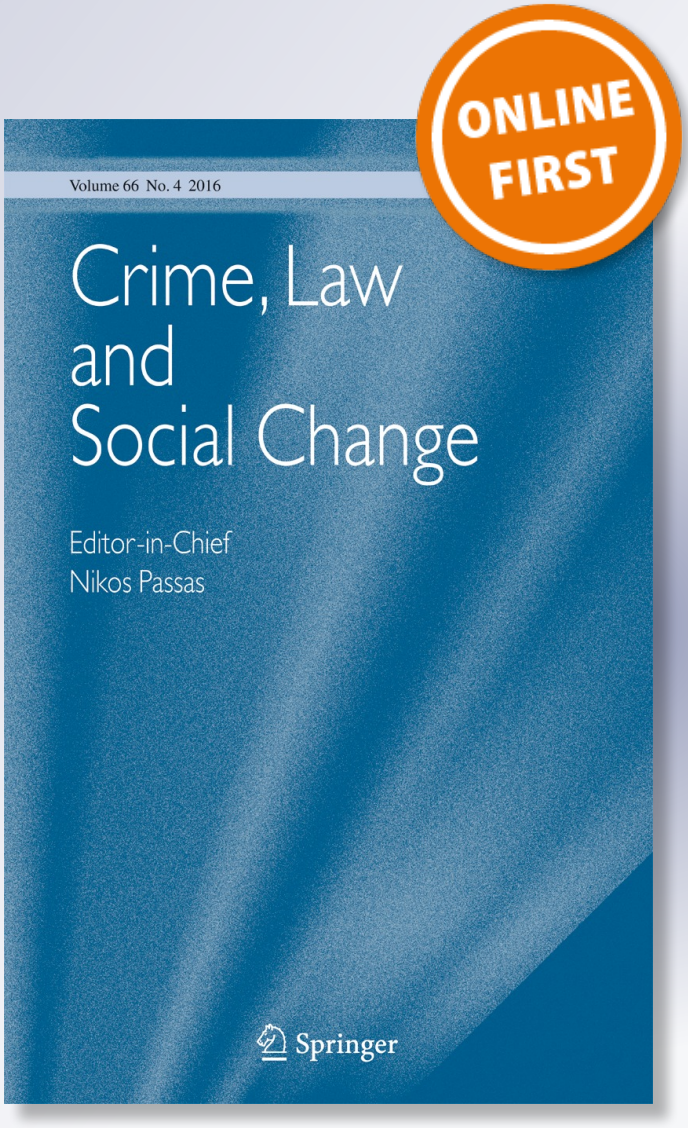

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Are children of rural migrants more delinquent than their peers? A comparative analysis of delinquent behaviors in the City of Guangzhou, China

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Abstract The social impact of rural-to-urban migration in China has grasped domestic and international attention over the past decades. Sociological scholarship indicates that this working class may be subject to social stigma and additional psychological stress. As new generations emerge, the migrant workers' children are publicized to engage in higher level of delinquency and deviant behavior in large Chinese cities. However, this understanding is supported by little empirical evidence as few studies focus on the delinquent behaviors of rural migrant children compared to their urban counterparts. The current study explores this comparison using a high school student survey ($N = 1{,}490$) conducted in Guangzhou, Guangdong Province. Important contributing factors to the prevalence and variety of self-report delinquency are discussed in the multi-theory framework. Findings suggest that this sample of rural migrant students are exposed to more risks but are not more delinquency-prone than non-migrant students; results show support to quite different socialization processes for the two groups: strong moral beliefs and good academic performance play key roles in the prevention of delinquency for rural migrant students while non-rural migrants are affected by school attachment and negative social activities. Peer delinquency is the strongest predictor of delinquency for both groups.

Introduction

The social dynamics in the large urban areas of China have been greatly transformed by the fast developing economy. Waves of migrant worker flow in to the cities for employment since the late 1970s; in 2014, China overtook the US as the leading

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economy for the first time in history [1].[1] In the meantime, the country is navigating through a unique transitional period when solutions to social challenges are catching up slowly with the economic success. One of the major social issues that emerged during this post-1978 period is the rising crime rate [2, 3]. One explanation may be the shift from a collectivism-oriented economic aspiration to a strong individualistic economic motivation [4, 5]. The failure of fulfilling such goal is regarded as a source of strain causing crime. Specifically, some scholars argued that the urban crime increase is largely due to a structural source of strain on the major population group motivated by economic opportunities in urban areas – the migrant workers [6, 7]. In addition, the struggle of the migrant class may go beyond the current generation— the children of migrant workers are also affected by government policies implemented through *hukou* status [8].

Academic attention on Chinese migrant workers was awakened by the inequality resulted from the government's traditional and persistent reliance on the household registration system ("*hukou*" system) to regulate the labor flows to large cities. Z. Liu [9] examined the different opportunities in education and employment comparing Chinese men with different *hukou* status and concluded that this institution contributes to both rural–urban inequality and inter-urban inequality. It has been regarded as one of the most powerful tools of social control by the state [10]. Despite proposals to abolish the *hukou* system, currently this institution remains in effect with continuing broad implications for generations to come [11].

Against this backdrop, the children of migrant workers form a unique group in the Chinese society. Those who were born in rural villages and followed their parents into large urban areas, as well as those who were born in the cities, may all be able to study in city schools; however, they are distinguished from their peers –children of families with generations of urban roots– by the notation on their household registration booklets with a "rural" *hukou* status. More recently, some officials and scholars attributed the increase of juvenile delinquency in urban areas partly to the perceived higher criminality of the children of migrant workers [12, 13]. However, the evidence is ambiguous and speculative at best. The available studies are overwhelmingly based on official arrest or incarceration data that have been affected by justice system processing. Little evidence from alternative data sources supports the assumption that the children of migrant parents[2] commit a higher proportion of offenses compared to their peers with urban roots. In contrast, several studies have revealed some degree of biased practice within the justice system toward the policing and constricting of migrant population in the cities [7, 15]. The conflicting arguments in this literature and the existing findings supporting *hukou* institution and social inequality further indicate the need for more empirical research with varying study samples to carefully examine this claim.

[1] The IMF calculated the Gross Domestic Product (GDP) based on purchasing power-parity (PPP) valuation of country GDP in current international dollar.

[2] A large body of sociological studies in China has been focusing on the stay-home children ("*Liu Shou*" *Children*) of migrant workers [e.g. 14] as many adult rural residents travel to large cities for employment, leaving their children at home cared by grandparents or other family members. Due to the detached relationship with their parents and poor social skills due to lack of supervision, these children were reported to have more behavioral problems than their peers [14]. Our study does not involve this population group, but rather those who were living in the city with their migrant parents (Guangzhou, Guangdong Province).

Our contribution to the literature is three-fold: first, the study uses self-report delinquency data to compensate the more prevalent use of official data in the literature in order to assess whether children of the newer migrant generation have a comparable level of delinquency as their urban-rooted peers; second, our sample is selected from the population of current middle and high school children in a Southern province of China and surveyed comprehensively with rich information collected for relevant factors and traits well supported by the Western criminological literature; lastly, the migrant children respondents are studied comparatively to the non-migrant children within a multi-faceted theoretical context including self-control, informal social control, strain, and differential association. We choose this well-rounded theoretical framework for the reasons related to the social characteristics of respondents within this age range and the consistent findings of multi-theory support in the literature [16–18]. Two main research questions are formulated: 1) whether the delinquency level of rural migrant children is different from that of their urban-rooted peers and 2) how comparable are rural migrant children to urban children on key individual and social characteristics and the effect of these factors on delinquent behavioral outcomes.

The rising crime rate and the propensity to crime among migrant population

Before describing the current study, it is helpful to understand the policy-making context. The government has loosened its policy on providing working permissions to rural-to-urban migrants since Deng Xiaoping's "Open Door" Policy in 1978 to quicken the pace of modernization and urbanization [15, 16]. To address the public unease toward the surging crime rate [2, 4–6], the Chinese government responded with several bouts of harsh campaigns cracking down on crime. [3]

Meanwhile, the flows of rural migrants are largely recorded by the *hukou* system. Each Chinese citizen bears a registration status of either "rural" or "urban", depending on the status of their parents [10]. To maintain a "healthy" volume of migrant population within city boundaries and minimize the resentment among urban residents due to high pressure on social infrastructures [8, 21], the government also relies on the national household registration system to control and monitor the "floating population". This system, *hukou* in Chinese pinyin (meaning *residency* literally) details the status of whether the individual is identified with a status of rural bearing or urban bearing, which is rarely changed from one to the other despite the current residential address. [4] As stated by the "The Regulations on Household Registration in the People's Republic of China" in 1958, "maintaining social order" is one of the key functions of this institution [23]. With this identification, some argued that it is instantly creating a "labeling effect" [21, 24].

The high crime rate among migrant populations has been documented overwhelmingly in the form of official statistics. The National Bureau of Statistics (NBS) reported

[3] There have been several "Strike-Hard" campaigns targeting crime rise in China and migrant workers were frequently targeted as a relevant group for sanction [19, 20]. An offense as could receive a punishment as severe as death.

[4] The government has recently started to loosen up the *Hukou* system by allowing some rural migrants to small cities stay and transfer to urban *Hukou* during the cities' urbanization processes [22].

around 274 million migrant workers in China in 2014 [25], about 20 % of the entire population. According to Wang and his colleagues [26] using arrest data from Beijing, the majority (over 50 %) of the suspects under police custody are of migrant status. Xu [15] also summarized police arrest data from several published studies focusing on major destination cities of migration. Large urban cities like Shanghai, and Xiamen also reported over 50 % of arrestees being migrant workers over a 10-year span. This rate in Guangzhou, in particular, has increased from 58 % in 1988 to 91 % in 2000 (p. 213). Juvenile crime has also been documented as on the rise: Lin [27] reported a 187 % increase of juvenile court petitions (defendants of age 14 to 18) from 1997 to 2007. In addition to arrest data, another main form of statistics used to support the "higher criminality" hypothesis of migrant workers is prison data. Fang [28] reported an official proportion of migrant individuals as 51 % among all inmates in Zhejiang Province. Jin [29] used prison samples ($N = 1{,}777$) from 13 provinces and reported that migrant workers and their city-residing children took up around 59 % of the all prisoners. These proportional numbers from police and correction, compared with the general population makeup, seem to support an overrepresentation of migrants in criminal violation.

Several relevant questions should be pondered upon while we consider the criminality of migrant children–those who hold rural *hukou* but live in the cities. First of all, *is it possible that the increase in official crime rate in large cities is partially a result of the systemic reaction to migrant crimes?* Marginalization of [8, 30] and discrimination toward [21, 31] rural migrant workers have been documented as a response to the strained social resources such as education, welfare, and public infrastructure as a result of urban population surge [32]. Residents with urban status often perceive migrants as selfish, untidy, and lack of education and manner. In this environment, migrant workers are reported to have higher occurrence of psychological issues such as anxiety and depression than the general population [24, 30, 33, 34]. Lower wage is also reported among migrant workers compared to their urban counterparts, which is likely related to the difference in types of labor markets where each group is favored [35]. Some scholars went a step further and characterized the bifurcated management through *hukou* status as "quasi-apartheid pass system" [36, p. 609], or a "new underclass" [37, p. 80]. Regardless of the nomenclature, a negative presumption may result in social repercussions toward the perception of migrant children as an entire group.

Secondly, *comparing migrant workers and urban* hukou-*holders, is official statistics alone (such as those obtained from the police or prison) sufficient to make reliable inference regarding the likelihood of offending?* The reliability of official crime data is not to be taken for granted due to its sensitivity to procedural characteristics of the justice system. The reliability of official statistics in China is also known to be "questionable" [38, p. 147]. Yet much of the discussion on the criminality of migrant workers and their children has relied on official statistics, partly because it is quite difficult to conduct self-report studies among migrant workers due to their high mobility and the sensitive nature regarding criminal behaviors. Even for official statistics, such as arrest data of certain offenses where Western criminologists regarded as closest official indicator of crime commission [39], it warrants careful interpretation in the current cultural context. Arrest data may include all that have been in police custody, but some are not necessarily related to a criminal matter. Thus, one wants to differentiate a criminal arrest from an administrative arrest (e.g. lack of work/residence permit), which can be quite challenging to do with the aggregate official data. In this

aspect, self-report crime measures are greatly needed to benchmark what has been observed in official arrest data.

Thirdly, *are migrant children who live in the city more likely to offend than other urban children?* Answering this question requires extensive data collection and careful examination. No consistent and robust evidence exists to support this assumption. It might be misleading to conclude from official data without examining other determinant factors aside from *hukou* status. A conclusion about the propensity to offend without comparisons to migrant children's peers, or consideration of common control variables to take out the confounding effect related to the migrant status, such as socioeconomic status and employment status of parents, could carry dangerous implications for policy.

Our study is acutely aware of these core concerns and pursues a focus on the children of the "New Generation" migrant workers and their self-reported delinquency compared with non-migrant peers. The next section we discuss the definition of "New Generation" migrants, the lack of criminological studies on their children, and existing literature on the application of Western theories to Chinese youth.

The "new generation" migrants and their children – a multi-theory framework

According to the latest statistics, there are about 274 million migrant workers in China [25]. Yet more than three decades since 1978, migrant workers in China are no longer a homogenous group. NBS classified the migrant workers into two groups: the "First Generation"—those who were born before 1980, and the "New Generation"—those who were born after 1980 [40], or in some studies, "Second Generation" [e.g. 41]. According to Lin [27], "New/Second Generation" migrant workers are more educated, less experienced in agricultural work, and more aspired toward urban life style [see also 12, 13]. However, little is known about the children of this younger generation and how close they compare to the children with urban roots.

Recent Chinese research findings concluded that their parents –the "New Generation" migrant workers– are more crime-prone than that of the "First Generation", especially for more serious offending. Lin and Liu [12] reported on the current migrant crime situation using Wenzhou, Zhejiang Province as an example: among all migrant offenders studied, the "New Generation" took up about 64 % while "First Generation" took up 36 %. They were also reported to be more likely to commit more serious crimes, such as drug trafficking, compared to "First Generation". In another study, Jin [29] reported that "New Generation" inmates (mean age = 25) in the study sample reported significantly higher self-report criminal behaviors compared to "First Generation" (mean age = 29), or other demographic groups (e.g. urban residents and rural farmers). They also have the highest prevalence of violent behaviors among all groups.

Despite the increasing research interest in juvenile justice in the Chinese setting [42], there is a paucity of empirical inquiries on delinquency among the children of the "New Generation" migrant workers, a succeeding cohort of migrant labor force to their parents. They have not yet been systematically examined in likelihood of delinquency and its key predictors. Some of these migrant children are living in large cities with their working parents under considerable pressure amidst the negative social perception

due to their rural *hukou* status [8]. Yet, little is known regarding whether they have different social profiles compared to their non-migrant peers.

The current study examines this younger understudied group whose migrant parents fall into the "New Generation" category defined by NBS, with a comparison group of their *urban*-hukou peers. We situate our study in a multi-theory framework for several reasons. First, existing literature on Chinese youth provides us grounds to believe that no single theory could best predict juvenile delinquency. Prior studies offer valuable theoretical insight as to how major Western criminological theories apply to adolescents in Chinese social settings. For example, Zhang [42] reviewed comparative studies that utilized survey data on juvenile justice in China and concluded that major theories such as the general theory of crime (low self-control), strain theory, differential association, and social control theory are supported in a Chinese context. Cheung and Cheung [17] used a sample of Hong Kong youth aged between 14 and 19 and tested a general theory of crime based on numerous elements of major theories. They found that self-control alone failed to predict delinquency but rather the combination of self-control and social factors perform better, further supporting the understanding that cultural aspect is relevant in understanding the cause of delinquency. Bao and colleagues [43] investigated the relevance of general strain theory (GST) to a Chinese context. In addition to the focus on GST, they found general support of this theory in a non-Western society and emphasized the importance of social bonds and school experience to Chinese youth and their delinquent behaviors.

To a large extent, the theoretical composition of the current study relies on informal social control theory [44, 45]. For younger individuals who are still in middle or high school, informal social control plays a key role in shaping behaviors. For adolescents, the school and the family are two major institutions that impose substantial influences on individual's social spheres. In the Chinese culture, a child absorbs life values from parents and grasps onto the safety net weaved by the parents, and they are taught to respect teachers and seek positive appraisals from them. Empirical studies on Chinese samples confirmed that the effect of family influence as a form of informal control on delinquency is in the same direction as those found in Western context [46, 47]. Greenberger et al. [48] found that although this effect is strong, it is giving way to the peer influence in rapidly changing Chinese culture.

In addition, as a student, youth attitude toward academic activities and relationship with peers are cornerstones of informal social control for youth in the form of attachment to school [49, 50], or school connectedness, as used in health science [51]. Using a youth sample from the City of Tianjin, Zhang and Messner [52] reported that attachment to school is inversely related to delinquency while the association with delinquent peers is related to a higher likelihood of delinquency. This finding is also consistent with that of the samples from the US [e.g. 53, 54] and other countries [see e.g. 55].

However, it is unclear how the children of migrant family specifically adapt in urban settings and whether they possess adequate protective mechanism against the risk of delinquency. Jiang, Lambert, and Wang [47] examined informal social control mechanism in a Chinese setting but did not particularly focus on young migrant population. Based on the earlier discussion of cultural and social structural background, indicators related to the level of self-control, economic and family strain, and association with delinquent peers are logical components to migrant children's urban life. As a unique demographic group, this emerging generation in migrant culture may carry distinctive

characteristics compared to non-migrant peers. Quantitative studies that examine migrant children and their social bonds and delinquency are virtually nonexistent.

Therefore, the current study addresses several main limitations of the existing literature. First, self-report data of non-confined individuals are still very rare in the study of delinquent behaviors. So far, surveys were conducted only to those who were in a correctional setting [12, 29]. It is precarious to generalize results from the officially sanctioned to the population at large. In addition, no studies have focused on migrant samples that are still in school. The early socialization process is pertinent to the discussion of risk factors accumulated throughout the early years such as social and human capital, which informs us the potential adult processes as they enter work force. Moreover, few studies have examined both the migrant group and a comparable non-migrant group draw from the outside the justice system to examine behavioral outcomes. Lastly, the extensiveness of factors examined in previous migrant studies is limited, covering only crime-related areas that lack a discussion on other domains such as family, school, community, peer relations, and self-image (e.g. self-control or moral beliefs).

Data and methods

The current study uses a sample of high school students in Guangzhou, Guangdong Province. Guangzhou is a large metropolitan city that has been at the forefront of the fast-paced economy and rapid crime climb since 1978. Within this economic and social setting, we speculate that migrant children may demonstrate higher levels of delinquency due to the marginalized status and limited access to public resources of migrant population in Chinese society; but the difference may be small. We also hypothesize that migrant children will demonstrate different characteristics in different social domains.

We construct our models based on multiple criminological theories, with measurements in domains related to the respondent's internal characteristics, the family process, the school experience, the ties to the community, and peer association. The goal of our study is not theory testing; therefore, we enter independent variables by block regarding these institutional domains rather than individual theories.

Sampling and data collection

Guangzhou is the third largest city in China with a population of approximately 14 million, and the urban population of approximately 11 million. It is one of the large cities where migrants move to seek employment. The urban area of Guangzhou has ten city districts with regular middle schools and vocational schools, the latter of which contain a higher proportion of children of rural migrants. Multilevel cluster sampling methods is adopted in selecting respondents. We selected one regular school (including one private school) and one vocational school each from the nine districts available for the research project. Then within each school selected, three classes were randomly selected from the roster of all classes in the school, covering all six grade-levels in

middle school (Grade 1 to 3) and high school (Grade 1 to 3). [5] All students present in the selected classes were asked to participate in the survey. The size of the classes ranges from 50 to 60 students. A total 1,600 students were selected. [6]

A total of 1,600 questionnaires were distributed to the students. Research staff explained to the students the purpose of the research and the voluntary nature of the survey and the questionnaire was filled out anonymously. Students were informed that they could withdraw at any point. Teachers were asked to leave the room when students were filling out the questionnaire. A total of 1,532 filled questionnaires were collected, a response rate of 95.75 %.[7] We define rural migrant (RM) student group as those who have rural *hukou* status. [8] The final study sample includes 1,490 students with valid *hukou* reporting; 435 students (29.2 % of study sample) reported having rural *hukou*, for which they will be analyzed in the RM group, and 1,055 students (70.8 %) will constitute the non-RM group. [9]

Measurement

Two dependent variables are used to gauge the self-report delinquency. The dichotomous measure of delinquency has the value of either "0" or "1", with "1" indicating a positive response if any of the 11 offenses were reported ("Have you done [one of the 11 behaviors] in the past 12 months?"). The 11 offenses include graffiti, vandalism, shoplifting, burglary, robbery, theft, weapon carrying, group fighting, attacking others, drug dealing, and animal abuse. [10] The variety score of delinquency is constructed by summing the dichotomous responses from this list of 11 offenses (range: 0~11). Both variables are self-report measures that reflect acts that may or may not have been detected by law enforcement officials within the past-year reference window.

Demographic variables include gender (coded "1" if respondent is male), age, and ethnic minority (coded "1" if respondent is of an ethnic group); family economic status (range: 1~6, from very bad to very good) is used to reflect socioeconomic status of the household in the absence of a household measure. These variables control for the individual background characteristics that may confound the relationship between important social bonds and the delinquent behavior outcome in regression models.

[5] This range of grades is equivalent to Grade 7 to 12 in the United States.

[6] In our sample, for regular schools, the ratio of students with urban verses rural *hukou* is 9:1; for vocational schools, this ratio is 1:1.

[7] High response rate is quite typical in Chinese surveys, particularly in school surveys [See e.g. 56].

[8] They could have been born within or outside of Guangzhou (or other cities), but the *hukou* status follows that of a parent. If a student is of rural status, it is very likely that both parents are of rural status.

[9] 42 students from the returned surveys (2.7 %) failed to respond to the *hukou* item and are therefore not be used in the study.

[10] Items on illegal downloading were included in the original questionnaire as one of the delinquent behaviors surveyed. However, the authors chose to exclude this item due to the common occurrence of this behavior among teenagers. In our study sample, 12 % of the 1,532 adolescent respondents reported having done this at least once, compared to the prevalence of other behaviors ranging from 4 to 9 %. The average frequency in the past 12 months is 5.2 times compared to the average frequency of other behaviors (.2 to .8). The inclusion of this item along with the other behaviors may inflate the delinquency measure since it is not commonly regarded as in the same category. A recent study reported around 80 % of young Internet users illegally downloaded materials [57]. In the Chinese context where digital piracy industries possess large market shares [58], this seldom-prosecuted practice is no longer regarded as risk taking.

Independent variables are organized in five domains: self, family, school, community, and peer. Several measurements tap into the self-identity of the student respondent that serves an internal control to deviance. A self-reported sufficiency of pocket money (range: 1~6, from too little to very good amount) [11] is used as a proxy to indicate whether the respondent feels unsatisfied economically. The lack of self-control is measured using a 9-item scale (alpha = 0.91). The higher the value of this scale, the lower the level of self-control for the respondent. Survey item details for the construction of each scale variable are presented in the Appendix Table 4. For alignment of moral beliefs, a scale variable of 8 items is used (alpha = 0.85). Shamefulness of deviant behavior is reported to gauge the self-reflective assessment of humiliation when parents, teacher, or friends know about three types of hypothetical scenarios (3 items, alpha = 0.95).

Two of the elements of social control theory (*commitment* and *attachment*) are included in multiple domains [see 59 for a discussion on *involvement* as part of *commitment*]. In the family domain, three variables are examined: parental supervision (12 items, alpha = 0.90), attachment to parents (4 items, alpha = 0.82), and whether parents argue very often (coded "1" if yes). The last item portrays the dysfunctional aspect of the family that potentially generates strain for the youth (Cheung and Cheung, 2008). In the school domain, five variables are included: attachment to school (4 items, alpha = 0.80), attachment to teachers (2 items, alpha = 0.67), negative social activities (6 items, alpha = 0.81), positive social activities (3 items, alpha = 0.53), and academic performance (range: 1~6, from "bottom of the class" to "one of the best in class"). For characteristics of the community that respondents live in, we use one scale variable: community cohesion (4 items, alpha = 0.90). Lastly, three variables evaluate the features of respondent's peer relationship: whether respondent reported having a group to hang out (coded "1" if yes), number of friends who have violated law (range: 1~5, from almost none to almost all) and peer delinquency (coded "1" if the respondent reported friends with any of the five behaviors: use hard drugs, steal, burglarize, rob, or harm others with a weapon).

Results

Table 1 shows the descriptive statistics of the two subsamples: non-RM vs. RM. The first and foremost question is whether there is a difference regarding the two delinquency measures. For the prevalence of delinquency behaviors, the comparison result is quite unexpected to what we anticipated in that no significant difference is found ($t = -0.141$, $p > 0.05$) between the two student groups. Both groups have around 16 % of students reporting at least one delinquent behavior in the past 12 months. In addition, the delinquency variety score is in fact higher among the non-RM group ($t = 2.15$, $p < 0.05$). A closer examination at the dependent outcomes show that significantly lower proportion of RM students is reported in seven out of the eleven delinquent behaviors (Fig. 1), including attacking others and robbery. This result points to the

[11] The last two demographic items measure the relative perception of the respondents ("Compared to most of the families you know, how is your family's economic status?" and "Compared to your peers, how do you find the amount of your pocket money?").

Table 1 Descriptive statistics of non-RM and RM student groups

Variable	Non-RM Student				RM Student				Group Difference
	Mean	Std.Dev	*N*	% Missing	Mean	Std.Dev	*N*	% Missing	
Dependent Variables									
Prevalence of delinquency	0.16	0.37	1,011	4.2 %	0.16	0.37	378	13.1 %	
Variety score of delinquency	**0.71**	2.42	1,011	4.2 %	0.42	1.54	378	13.1 %	*
Control Variables									
Male	0.51	0.50	1,045	0.9 %	**0.57**	0.49	428	1.6 %	*
Age	15.0	1.90	1,055	0.0 %	**16.6**	2.16	435	0.0 %	*
12 and younger 3.6 %			54						
13–15 38.9 %			579						
16–18 50.7 %			755						
19 and older 6.9 %			102						
Ethnic minority	0.02	0.15	1,052	0.3 %	0.03	0.16	431	0.9 %	
Perceived family economic condition	**3.44**	1.30	1,048	0.7 %	3.06	1.16	428	1.6 %	*
Commuter (to school)	**0.74**	0.44	1,028	2.6 %	0.25	0.43	416	4.4 %	*
Independent Variables Self									
Sufficiency of pocket money	2.64	1.20	1,046	0.9 %	2.63	1.11	428	1.6 %	
Low self-control	15.16	5.88	1,011	4.2 %	**16.25**	6.17	381	12.4 %	*
Shamefulness of delinquency	**24.17**	4.70	1,013	4.0 %	23.40	5.18	384	11.7 %	*
More beliefs	27.85	4.25	1,014	3.9 %	27.68	4.45	387	11.0 %	
Family									
Parental supervision	**42.72**	10.56	1,045	0.9 %	39.23	10.89	421	3.2 %	*
Parental attachment	16.76	3.39	1,039	1.5 %	17.04	3.22	419	3.7 %	
Frequent inter-parent argument	0.16	0.36	1,033	2.1 %	0.15	0.36	409	6.0 %	
School									
School attachment	**11.59**	2.98	1,036	1.8 %	10.73	3.00	412	5.3 %	*
Positive social activities	**6.41**	1.47	1,016	3.7 %	5.73	1.54	396	9.0 %	*
Negative social activities	7.12	2.00	1,016	3.7 %	7.31	2.14	395	9.2 %	
Attachment to teacher	8.48	2.53	1,032	2.2 %	8.47	2.42	410	5.7 %	
Academic performance	3.98	1.20	1,025	2.8 %	3.97	1.13	407	6.4 %	
Community									
Community cohesion	17.34	4.87	1,007	4.5 %	17.87	4.55	379	12.9 %	
Peer relations									

Table 1 (continued)

Variable	Non-RM Student				RM Student				Group Difference
	Mean	Std.Dev	*N*	% Missing	Mean	Std.Dev	*N*	% Missing	
Has a group to hang out	0.81	0.39	941	10.8 %	0.81	0.40	331	23.9 %	
Number of friends violating law	1.19	0.60	1,052	0.3 %	**1.32**	0.84	433	0.5 %	*
Peer delinquency	0.06	0.24	968	8.2 %	**0.33**	0.34	384	11.7 %	*

Group difference is tested by using t test ($p < 0.05$) and significant difference is marked with "*" and the higher mean of the two groups is bolded

possibility that rural migrant students in this sample are not more prone to delinquency compared to their urban-rooted peers in the school.

For key independent variables, group comparisons are also conducted using *t* test, the results of which are shown in Table 1. As a general descriptive profile for RM students, they report a lower level sufficiency regarding pocket money, lower likelihood to feel shameful to delinquent deeds, a higher level of low self-control, lower levels of parental supervision, positive social activities, and school attachment. They have more delinquent friends who might have violated the law. In a nutshell, rural migrant students may be exposed to comparatively higher levels of risk in multiple domains, even though some other crucial factors do not indicate difference from non-RM students (e.g. moral beliefs, attachment to parents or teacher, participation in negative social activities, academic performance, and community collective efficacy).

A comparison of demographic characteristics reveals more difference about these two groups. Rural migrant group has a higher percentage of male students, older in age; they also reported a lower level of perceived family economic condition and a much lower percentage of commuters (25 % vs. 74 % among non-RM students).

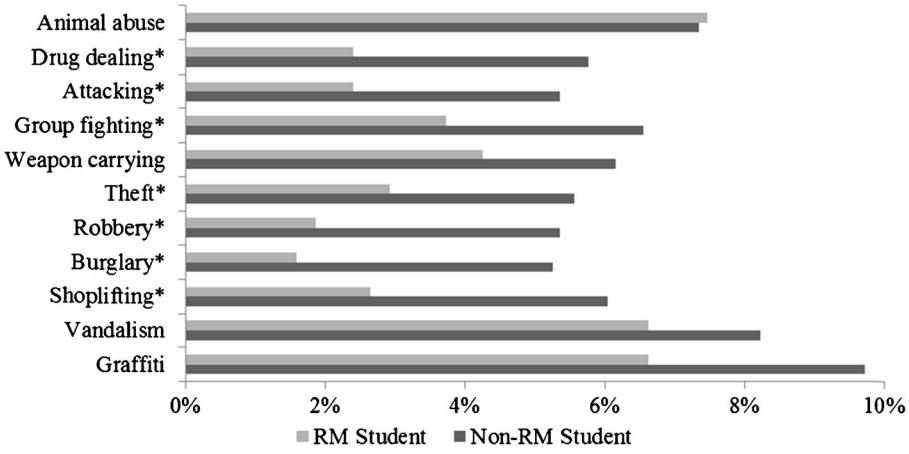

Fig. 1 Comparison of prevalence on self-report delinquency. Note: * indicates statistical significance in group comparison

Multivariate logistic regression modeling is used to examine the factors in different domains and their respective relationship with the dichotomous delinquency outcome. Non-RM students and RM students are run in separate models. Domains of variables are entered by block separately (Model 1: self; Model 2: family; Model 3: school; Model 4: community; Model 5: peer, also the Full Model with all key variables). All models include control variables. Model performance is assessed using Akaike information criterion (AIC) and Bayesian information criterion (BIC).

Table 2 presents the logistic results with untransformed coefficients on prevalence of delinquency of two student groups with considerable dissimilarity. Each model predicts prevalence of delinquency with an additional set of variables. For Model 1, among the measures in the self domain for non-RM students, one unit increase in the reported value of the scale measuring low self-control is related to a 5 % increase in the odds of delinquency (coeff. = .05, OR = 1.05). However, the level of self-control does *not* show significant effect on the dependent variable for the RM group in all the models. One unit increase in the values of moral belief scale is related to a 6 % decrease in the outcome measure for non-RM respondents (coeff. = −.07, OR = .94); this effect is 11 % decrease for RM respondents (coeffi. = −.12, OR = .89).

Unexpectedly, in Model 2 none of the family control variables are found to contribute to lower chances of delinquency for the Non-RM group. However, for the RM group, a unit increase in frequent home conflict predicts a 15 % in Model 2 (coeff. = 1.11, OR = 1.15) and 22 % in the Full Model (coeff. = 1.31, OR = 1.22). The significant role of this factor is consistent for this student group across models. Regarding the school domain entered in Model 3, the prevalence of delinquency among the RM students is *not* affected by any indicators concerning the involvement and attachment to school. However, for the Non-RM group, more involvement in positive social activities predict a lower likelihood of delinquency and the opposite direction is observed for negative social activities; however, only the latter remains significant in the Full Model with an effect of 19 % increase for the odds of delinquency (coeff. = .17; OR = 1.19).

For community and peer domains, only peer delinquency is found to be significantly affecting the odds of delinquency for both Non-RM and RM student groups and the effect is quite strong, translating into three times the odds for delinquency for each unit increase in the delinquency level of peers (coeff. $_{\text{Non-RM}} = 1.20$, OR = 3.31; coeff. $_{\text{RM}} = 1.21$, OR = 3.34).

Results in the Full Model (in Table 2), where measures in all domains are considered, indicate that many significant relationships were mediated, except that some predictors remained consistently significant across models with only peer delinquency as the shared significant predictor for both groups. For Non-RM group, none of the indicators in self, family, and community domains are significantly related to the binary delinquency variable. However, each unit increase in the involvement in negative social activities and peer delinquency (not the number of delinquent peers) increases the odds of delinquency by 19 % and 331 % respectively. For migrant student group, each increase in the level of perceived sufficiency of pocket money is related to two times the odds of delinquency. This is unexpected in the general understanding of economic strain where the satisfaction of financial needs should predict a lower level of delinquency. The direction of the relationship is consistent across models. Moral beliefs relates to the odds of

Table 2 Multivariate logistic regression on prevalence of delinquency

	Non-RM Group					RM Group				
	Model 1	Model 2	Model 3	Model 4	Model 5 (Full Model)	Model 1	Model 2	Model 3	Model 4	Model 5 (Full Model)
Male										0.837* *(0.416)*
Age										
Ethnic minority	1.096* *(0.505)*	1.095* *(0.506)*								
Perceived family economic condition										-0.561* *(0.251)*
Commuter (to school)	-0.693*** *(0.199)*	-0.751*** *(0.205)*	-0.618** *(0.216)*	-0.609** *(0.217)*	-0.666* *(0.270)*					
Self Domain										
Sufficiency of pocket money[a]						0.355* *(0.174)*	0.375* *(0.184)*	0.418* *(0.188)*	0.449* *(0.191)*	0.829** *(0.263)*
Self-control Scale	0.048** *(0.016)*	0.047** *(0.016)*								
Shamefulness of delinquency										
Moral beliefs	-0.066** *(0.020)*	-0.055* *(0.022)*				-0.117*** *(0.035)*	-0.104** *(0.036)*	-0.107** *(0.038)*	-0.096* *(0.038)*	-0.095* *(0.044)*
Family Domain										
Parental supervision	-					-				
Parental attachment	-					-				
Frequent home conflict[a]	-					-	1.106** *(0.394)*	1.072** *(0.411)*	1.036* *(0.413)*	1.311** *(0.471)*
School Domain										
School attachment	-	-				-	-			
Attachment to teacher	-	-				-	-			
Positive social activities	-	-	-0.183** *(0.071)*	-0.184** *(0.071)*		-	-			
Negative social activities	-	-	0.270*** *(0.044)*	0.271*** *(0.044)*	0.171*** *(0.052)*	-	-			
Academic performance	-	-				-	-			
Community Domain										
Community cohesion	-	-	-			-	-	-		
Peer Relations Domain										
Has a group to hang out	-	-	-	-		-	-	-	-	
Number of friends violating law	-	-	-	-		-	-	-	-	
Peer delinquency	-	-	-	-	1.196*** *(0.358)*	-	-	-	-	1.205* *(0.495)*
N	960	950	943	943	858	358	354	352	351	297
AIC	816	806	765	766	**584**	308	302	306	303	**249**
BIC	865	869	852	858	**689**	346	353	375	377	**330**
Pseudo R-sq (McFadden)	0.062	0.063	0.118	0.119	0.137	0.084	0.097	0.117	0.12	0.199

Listwise deletion is adopted. Untransformed coefficients are reported; standard error statistics are in parentheses. While the variables above the line are included in respective models, only significant results are shown in this table

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

[a] These coefficients are significantly different between Non-RM and RM models

delinquency reversely: each level of increase in the respondent alignment with the moral belief items is related to a 9 % decrease in the odds of delinquency. Family discord also affects the migrant student group significantly (coeff. = 1.31, OR = 3.71), the magnitude of which is slightly larger than the effect of peer delinquency (coeff. = 1.21, OR = 3.34).

Regarding the variety score of the delinquency measure, we utilize multivariate negative binomial model with robust standard errors for the reason that the dependent variable is right-skewed with overdispersion [60, 61]. Results are

presented in Table 3.[12] Several significant predictors similar to the prevalence model are observed; but some results are worth mentioning. For example, in the Full Model, moral beliefs remain a significant predictor of delinquency, but only observed among RM students. Each unit of increase in moral beliefs relates to a decrease with a factor of .903 in variety score when all other variables are held constant (coeff. = −.10, Incident Rate Ratio [IRR] = .90).

Frequent home conflict affects notably the RM students by increasing the variety score while controlling for other factors (coeff. = 1.05, IRR = 2.86), but this effect is not observed among non-RM students. The direction of influence from having more pocket money remains a positive one on variety score of delinquency as well for RM students, with an IRR factor of 1.51. In the school domain, different from the results based on the logistic model, RM students' academic performance exerts a small effect on reducing the diversity of delinquent deeds (coeff. = −.35, IRR = .71).

However, none of these variables creates meaningful impact for the non-RM group. For the non-RM group, a different set of significant predictors are at play. Having low self-control predicts a higher variety score of delinquency (coeff. = .08, IRR = 1.08). Higher level of parental supervision is also related to a higher variety score prediction, albeit a quite small effect size (coeff. = .03, IRR = 1.03). School attachment relates to a small magnitude of decrease toward the delinquency variety (coeff. = −.10, IRR = .90); negative social activities remain criminogenic for this group (coeff. = .13, IRR = 1.14).

Peer delinquency is the only common predictor for both groups and retains its strong influence on not only the odds of becoming delinquent, but also the variety of delinquent behaviors of the student respondents. Further, for the non-RM group, each additional delinquent friend who reportedly violates the law could relate to a factor of 1.40 increase in the variety of delinquency (coeff. = .35, IRR = 1.40).

Regarding the control variables, the measurement on whether the respondent commutes to school is revealed to be a strong predictor for Non-RM group. It is important to understand that most urban resident students commute and the rural migrant students are much more likely to be staying on campus due to their residence status (Mean $_{Non\text{-}RM}$ = .74, Mean $_{RM}$ = .25; t = 18.97). This is a unique correlate observed among this group.

Discussion and conclusion

The current study offers a comparative view on rural-migrant students and students with urban roots regarding delinquent behavior and its important correlates. Our results demonstrate that the presumption of higher propensity to delinquency among migrant children might not be well-founded. The authors believe that *hukou* status alone is not a reliable predictor to indicate criminality. In our study sample, the proportions of delinquent students in Non-RM and RM groups are not different (approx. 16 % for both groups), and the average delinquency variety score is higher in Non-RM group. RM students also reported significant lower prevalence in serious delinquent behaviors such as robbery and attacking other people. This finding may be explained by the general social atmosphere on juvenile

[12] Poisson model is not adopted in this study due to overdispersion of the variable delinquency variety score confirmed by likelihood-ratio test of alpha rejecting the hypothesis that alpha equals zero, thus negative binomial models are more appropriate than Poisson models.

Table 3 Multivariate negative binomial regression on delinquency variety score

	Non-RM Group					RM Group				
	Model 1	Model 2	Model 3	Model 4	Model 5 (Full Model)	Model 1	Model 2	Model 3	Model 4	Model 5 (Full Model)
Male						0.654* *(0.294)*	0.749* *(0.302)*			0.822* *(0.340)*
Age	0.172* *(0.082)*				-0.143* *(0.061)*		-0.239* *(0.120)*	-0.248* *(0.114)*	-0.236* *(0.116)*	
Ethnic minority										
Perceived family economic condition										
Commuter (to school)	-1.098*** *(0.253)*	-1.113*** *(0.257)*	-0.612* *(0.243)*	-0.626* *(0.247)*	-0.721** *(0.265)*			-0.923* *(0.400)*	-0.927* *(0.394)*	
Self Domain										
Sufficiency of pocket money[a]									0.333* *(0.157)*	0.465* *(0.219)*
Self-control Scale					0.078** *(0.025)*					
Shamefulness of delinquency										
Moral beliefs	-0.141*** *(0.037)*	-0.175*** *(0.039)*	-0.146*** *(0.043)*	-0.133** *(0.043)*		-0.155*** *(0.036)*	-0.108** *(0.037)*	-0.104** *(0.035)*	-0.087* *(0.039)*	-0.103* *(0.048)*
Family Domain										
Parental supervision			0.034* *(0.016)*	0.031* *(0.016)*	0.026* *(0.011)*					
Parental attachment		0.076* *(0.036)*								
Frequent home conflict[a]							1.412*** *(0.412)*	1.169** *(0.368)*	1.104** *(0.360)*	1.051** *(0.325)*
School Domain										
School attachment					-0.103* *(0.046)*					
Attachment to teacher										
Positive social activities			-0.330*** *(0.088)*	-0.316*** *(0.092)*		-	-			
Negative social activities			0.573*** *(0.091)*	0.562*** *(0.088)*	0.130** *(0.046)*	-	-	0.151* *(0.076)*	0.151* *(0.075)*	
Academic performance								-0.317* *(0.127)*	-0.333* *(0.129)*	-0.349** *(0.119)*
Community Domain										
Community cohesion				-0.085*** *(0.024)*						
Peer Relations Domain										
Has a group to hang out										
Number of friends violating law					0.336* *(0.153)*					
Peer delinquency					0.991** *(0.306)*	-	-	-	-	1.174*** *(0.309)*
N	960	950	943	943	858	358	354	352	351	297
AIC	1,520	1,472	1,416	1,409	**782**	481	459	457	453	**357**
BIC	1,573	1,540	1,508	1,506	**892**	524	513	531	530	**442**
Pseudo R-sq (McFadden)	0.030	0.035	0.074	0.080	0.141	0.068	0.082	0.105	0.106	0.18

Listwise deletion is adopted. Untransformed coefficients are reported; standard error statistics are in parentheses. While the variables above the line are included in respective models, only significant results are shown in this table

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

[a] These coefficients are significantly different between Non-RM and RM models

justice in China as a whole illustrated by Shen and Hall [62]. While comparing the situation of juvenile crime surge in China with common characteristics of the Western world, Shen and Hall [62] identified factors such as socioeconomic disruption and widening social inequality as universal explanations for this social problem, regardless of *hukou*. Furthermore, the relatively good applicability of major Western criminological theories to the Chinese context implies that there are considerable similarities in the crime issue during a country's modernization process. *Hukou* status in this context is much less powerful in implicating someone as many Chinese research or reports argued it would be. Nevertheless,

we do highlight the observation that *hukou* status is closely linked to the characteristics of multiple social domains of migrant children—RM students are exposed to higher level of risk in multiple areas, such as lower parental supervision, lower school attachment, lower level of positive social activities, and higher level of peer delinquency.

Regarding this counter-intuitive finding of high risk but not high delinquency among RM students in comparison to Non-RM students, we postulate that it might be related to the following reasons. First, it is arguable that unobserved protective characteristics are at play to explain the behavioral mechanism of RM students facing this higher level of risk. Currently, academic performance and moral beliefs are revealed to be protective factors that RM students have but do not share with Non-RM students. It is important to note that common factors based on criminological theories do provide comparable explanatory powers (pseudo-R square) in the RM models presented by our study. Therefore, more etiological studies are greatly needed to explore whether RM students undergo different processes in the developmental process. Moreover, our sample is constructed from a student population. It is possible based on class oppression hypothesis that schools are more sensitive to the deviant behaviors of RM students and any questionable behavior known to the school administration may render the student ineligible for the continuation of his/her study, resulting in currently registered RM students a selected well-behaving pool. Lastly, it might also be possible that there is a consistent underreporting phenomenon regarding delinquency, and that RM students are more conscious about the repercussions of reporting, as the percent missing on the reporting of delinquent behaviors is higher in RM group.[13]

Although no significant difference on prevalence of delinquency at bivariate level is observed, we proceeded to examine important correlates of delinquency (in prevalence and variety score) in each group based on the assumption that rural migrant students may manifest different links of key social domains with delinquency within the unique *hukou*-stratified, post-economic-reform environment of China. Several important findings are noteworthy. First, moral disapproval of delinquent behaviors shows crucial influences among RM students on delinquency. This is consistent with previous Chinese-context studies [e.g. 63] that moral values remains an important element in social control for youth who experience considerable risk of offending. The observation of this effect among RM students may be indicative of retaining traditional values in families originated from rural countries. Early criminologists like Matza [64] argued that the guilt and shame associated with any hypothesized delinquent act may connect to a negative self-image and became powerful in dissuading adolescents from acting out. Our additional analysis offers support to the argument by Sykes and Matza [65] that delinquent youth justify offending by lowering the level of blameworthiness as a neutralization technique; they are not as likely to feel the questionable behaviors as morally offensive. Figure 2 presents the distribution of each item on moral beliefs by delinquency status. An interesting observation from this figure is how respondents who reported a delinquent behavior also regard this behavior as the least problematic on a

[13] A follow-up analysis focusing on those RM students who did not report on delinquency shows that they are significantly more likely to be male, slightly older, higher academic performance, not communiting to school, and lower attachment level to teachers. However, these are not indicators strong enough to suspect the strength of the current findings.

moral level, compared to the other two groups. [14] In the case of RM students, although they did not show significantly higher level of alignment to moral beliefs on average compared to Non-RM students, results indicate that this factor is meaningful to control both the likelihood to be delinquent and how delinquent they may become. It is possible that the heavy reliance on traditional value system among RM students provides a shield to protect the young group from a tempting urban environment and the higher risk in multiple domains. Moreover, connecting the studies on comparatively high level of shyness and unsociability among rural children [66], moral codes may offer justification for them to remain in the background in an urban school, particularly those admitting students with both urban and rural *hukou* status. Considering the relatively low rate of delinquency among Chinese youth (16 %), as opposed to American youth whose average 12-month prevalence is about 29 % [67], maintaining positive self-image and conforming to the norm may be preferred over the deviant "cool kids" in this cultural setting. Future studies may explore the implications of moral beliefs on behavioral outcomes among different groups of children who might be exposed to different social environment (rural vs. urban) in China.

Furthermore, RM students are more affected negatively by family discord. This might be indicative of the effect of disruptive family environment on youth delinquency especially when psychological tension may be involved. While items pertaining to those in psychological evaluation are not available in current data, the frequent arguments of parents in the household was adopted in the model to serve as a proxy for strain. Ferguson and his colleagues [68] found that children exposed to intimate partner violence or domestic violence, even only in the form of psychological aggression, could be linked to the development of aggression in children. Further, we postulate that RM students' sensitivity to frequent parental arguments may relate to prior separation from parents as it is often seen for children born to migrant parents with rural *hukou* [see 69 for effect of early separation from parents on child mental health in China]. Nevertheless, future studies are encouraged to focus on the well-being of children who might have experienced early separation and subsequent reunion with migrant parent, as well as the process of adjustment to urban life during their development. Currently, considerable attention has been (rightfully) on the "stay-home" children in rural villages while their migrant parents work in the cities (see Footnote 2). Yet children of migrant parents in general are in an unconventional relationship with their parents due to the intensive workload of migrant workers in Chinese cities. This alone poses potential risk to possible behavioral outcomes of the children in the long run. Comparatively, the relationship between parental attachment and delinquency is mediated when all factor domains were considered. This is possibly due to lack of covariance. One recent study [70] found in in-depth interviews with 16 families in Guangzhou, China that the parent-adolescent relationship is characterized by good communication, reasoning, and emphasis on academic achievement including both working-class and middle-class families.

The third key finding is that the perceived economic condition may play a role in the development of delinquency among RM students. Although we do not have direct measurement on socioeconomic status in the form of household income and the educational

[14] A comparison t test also confirmed that those in the whole sample who are reportedly delinquent have considerably lower level of shamefulness regarding delinquent and deviant acts (Mean: 24.2 v. 22.4, $t = 5.27$). Separate tests were also run by *hukou* status (Non-RM and RM) and both groups demonstrate that those who reported to be delinquent are much more likely to report lower shamefulness regarding delinquent deeds (Mean $_{\text{Non-RM}}$: 24.5 v. 22.7, $t = 4.39$; Mean $_{\text{RM}} = 23.8$ v. 22.0, $t = 2.50$).

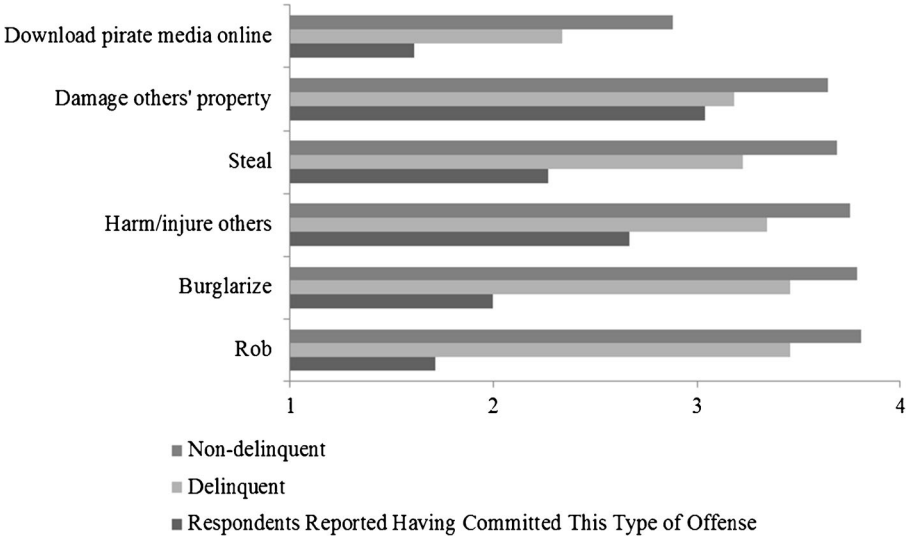

Fig. 2 Moral beliefs – how wrong are these behaviors? Note: Value label: *1* Not wrong; *2* A little wrong; *3* Wrong; *4* Very wrong. Responses are significantly different between delinquent and non-delinquents on all these items

level of the parents, we applied proxy measurement of self-perceived family economic condition when compared to others. This item relates to delinquency negatively with significance in regression models on the prevalence of delinquency among RM students. This is partly consistent with existing studies on Chinese samples [71] that low SES adolescents are in higher risk of delinquency even when all other factors are taken into consideration. This might be explained by the fast-changing social environment when relative deprivation may be experienced. More empirical studies are needed to investigate this relationship.

In addition, we noted that peer delinquency is the strongest predictor of delinquency, regardless of *hukou* status, among all factors we have considered. This is consistent with previous published studies such as Bao, et al. [43], Cheung and Cheung [17], Greenberger et al. [48], Wong [18], and Zhang and Messner [52]. Particularly for the Non-RM group in our study, their delinquency variety is also related to the total number of delinquent friends. Although parental supervision and attachment are interrelated with peer influence, Tilton-Weaver and her colleagues [72] found that parents' involvement in peer selection could backfire and result in higher level of influence from delinquent peers. But when clear rules are established, parents may be able to protect the child from the negative influence of peers. This might potentially explain why RM students were not significantly more delinquent even though they were more likely to socialize with delinquent peers. Parents in RM families may not monitor and critique their children as much as non-RM parents would [70]. This is supported by our finding that the non-RM group has a small but significant and positive relationship between parental supervision and delinquency variety score while all other factors are controlled. This might allude to the "backfire" from over-parenting among some of the non-RM families. We concur that peer influence on delinquency is quite complicated and nuanced amidst other factors and warrant further investigation focusing on these young subjects.

Some questions remain to be answered. For example, we found Non-RM students who commute are showing much lower levels in delinquency in the Full Model. This indicator may be a proxy of a particular mechanism that is not fully observed in our data. We speculate that this might be an indication that Non-RM students who commute possibly have shorter time socializing with delinquent peers therefore commuting status mediated the relationship to some extent. But further studies are needed on whether other potential mechanisms are also in effect involving a commuting Non-RM student.

Another important finding that eagerly seeks future scholarly attention concerns the counter-intuitive high-risk-but-not-high-delinquency among RM students. This is a finding that cannot be overlooked. Both student groups have significant characteristics that serve as protective factors from their involvement in delinquency. However, as previously mentioned, it is possible that the RM students captured in the study sample may be of a unique group in and of itself. Their exposure to risk in multiple domains may be generalizable to some extent to the RM youth at large but whether their delinquency level is also representative may need to be further investigated by examining factors concerning possible transient nature of RM children, such as education stability and high school dropout rate for both student groups.

Since 2014, a household registration reform was initiated by the State Council to abolish the differentiation between "rural" and "urban" residence status [22]. From a policy standpoint, this could be a positive first step in effectively unifying public service for universal availability as well as monitored quality, and all who contribute to the vast urbanization process of China could benefit from the economic advancement the country has made in the past 40 years. For RM students living in urban environment, they could benefit more support from schools that help the family process and the stress of both migrant parents and their children to maintain a healthy bond. As we demonstrate the urgent need for more studies on migrant youth particularly those who experienced early separation from their biological parents ("stay-home" children), it is also important to establish long-term programs that facilitate the family reunion and adjustment of this vast group of labor force in urban China.

Our study serves as a first comparative look at RM and Non-RM students in the City of Guangzhou. Certain caveats exist and warrant caution in interpretation. First, the study is based on a cross-sectional dataset. Therefore, we do not argue any causal relationship regarding any of the factors observed. However, cross-sectional studies are quite useful and enlightening in identifying meaningful links and mechanisms of influence on behavioral outcomes. Further longitudinal studies with multiple follow-ups are highly encouraged to closely monitor change in behaviors and the possible contributing force to these changes. Second, as it is a self-reporting survey administered in classrooms, we acknowledge the possibility of underreporting on sensitive topics such as serious delinquent behaviors [73]. Thus, it might be helpful to obtain other sources of data such as from parents, teacher, or possibly local police officer report. Moreover, it is unclear in the literature whether there is a differential likelihood of underreporting by rural and urban children. Further, data from only one city are considered in the current study thus caution is advised to generalize to other contexts. That said, we emphasize that the characteristics of Guangzhou may be paralleled in other urban cities that receive large amount of migrant labor, such as Beijing, Shanghai, and Shenzhen. Lastly, future studies are encouraged to identify culture-relevant predictors that may account for the variation of delinquency in addition to the mechanisms suspected here.

As a unique cultural model, China is experiencing rapid social changes related to many spheres in human relations and social institutions being transformed. To quote from Zhang, et al. [74, p.485], "A critically important task for comparative criminology is to conceptualize social factors that might be uniquely relevant to particular social-cultural contexts and to examine the impact of these factors across such contexts." We hope this academic conversation on the children of migrant workers continues as more independent survey and interview data from China are collected and analyzed.

Appendix

Table 4 Items of the independent variable scales

Scale	No.	Items		Original responses
		A	B	
Shamefulness—How shameful would you feel when your A find out that you B ?	1	best friend	…caught for shoplifting …caught for attacking other people …arrested by the police	1 Not t all 2 A little bit 3 Very shameful (the final measure on each "A" is calculated by summing the three "B" responses)
	2	teacher	…caught for shoplifting …caught for attacking other people …arrested by the police	
	3	parents	…caught for shoplifting …caught for attacking other people …arrested by the police	
Moral beliefs[a]—How wrong do you think when people your age …?	1	…talk back to teachers and parents.		1 Very wrong 2 Wrong 3 A little wrong 4 Not wrong at all
	2	…insult people of different race/ethnicity or origin.		
	3	…destroy other people's property.		
	4	…download movies and music illegally.		
	5	…shoplift.		
	6	…buglarize.		
	7	…attack others to harm them.		
	8	…rob others with a weapon.		
Low self-control[a]	1	I often act before thinking carefully.		1 Completely agree 2 Agree 3 Somewhat disagree 4 Completely
	2	I do not consider long-term goals and act for instantaneous pleasure.		
	3	I do not consider the future when I make a decision.		
	4	I sometimes do dangerous things for excitement.		

Table 4 (continued)

Scale	No.	Items		Original responses
		A	B	
	5	I sometimes do dangerous things for fun.		
	6	Fun and excitement are more important than safety.		
	7	I consider myself first when making a decision even though it might trouble others.		
	8	If other people were mad, it is not my fault; it is theirs.		
	9	I try hard to get what I want even if it brings trouble to others.		
Parental supervision[a]	1	When I go out, my parents know where I am.		1 Always 2 Often 3 Sometimes 4 Rarely 5 Never
	2	When I go out, my parents know what I am doing.		
	3	When I go out, my parents know who I am with.		
	4	If I came home late, my parents would ask me what I did, where I was and who I was with.		
	5	If I wanted to go out at night, my parents ask me to come back before certain hour.		
	6	If go out and would be home late, I call my parents to let them know.		
	7	My parents check me if I finish my homework.		
	8	My parents check what movies I watch to make sure age-appropriateness.		
	9	I tell my parents whom I hang out with.		
	10	I tell my parents how I spend my pocket money.		
	11	I tell my parents where I would be after school.		
	12	I tell my parents what I do during free time.		
Attachment to parents[a]	1	I have a very good relationship with my father/step father.		1 Completely agree 2 Agree 3 Neutral 4 Disagree 5 Completely Disagree
	2	I have a very good relationship with my mother/step mother.		
	3	I receive emotional support very often from my parents.		
	4	I feel sad if I disappoint my parents.		

Table 4 (continued)

Scale	No.	Items	Original responses
		A B	
Attachment to school[a]	1	If we had to move, I would miss my school.	1 Completely agree 2 Agree 3 Somewhat disagree 4 Completely disagree
	2	Most mornings, I look forward to school.	
	3	I like my school.	
	4	The classes at school are fun.	
Attachment to teachers	1	If you moved to another city, how much do you miss your favorite teacher?	1 Not all, 2 Not much, 3 A little bit, 4 Somewhat, 5 A lot, 6 Very much.
	2	How important it is to you about what your favorite teacher think of you?	1 Not at all, 2 Not important, 3 Not that important, 4 A little bit, 5 Somewhat important, 6 Very important.
Positive social activities	1	I do creative activities (such as acting, playing instruments, drawing, writing, or reading).	1 Never 2 Sometimes 3 Often
	2	I go to the gym to keep fit.	
	3	I study and do homework.	
Negative social activities	1	I fight with others.	1 Never 2 Sometimes 3 Often
	2	I do illegal things for fun.	
	3	I drink alcohol.	
	4	I use drugs.	
	5	I smoke.	
	6	I prank others for fun.	
Community cohesion[a]	1	We help each other in the community.	1 Completely agree 2 Agree 3 Somewhat disagree 4 Completely disagree
	2	We are close to our neighbors.	
	3	We trust our neighbors.	
	4	We get along well with our neighbors.	

[a] Indicates that items that are reversely coded before analyses

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