Social Stigma and Quality of Life among Rural-to-Urban Migrants in China: A Comparison with Their Rural Counterparts

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Abstract

Social stigma has been identified as a major concern in healthcare. Its association with quality of life among migrants is rarely assessed. Using data collected through a cross-sectional survey among 1,006 rural-to-urban migrants and 1,020 rural residents in China, this study examines the experience of stigmatization in relation to four domains of quality of life. Rural-to-urban migrants perceived a higher level of social stigma and a lower level of quality of life than their rural counterparts. Multiple regressions indicated the importance of social stigma in accounting for subjective quality of life for migrants. In addition, personal income, family economic status and health status were positively associated with increased quality of life. Social stigma has a significant influence on quality of life among rural-to-urban migrants in China. Future interventions should seek to improve public attitudes to rural-to-urban migrants and generate action to eliminate stigma, discrimination and prejudice.

Introduction

Quality of life is a broad concept that includes all aspects of life (Guyatt et al. 2007; Hong and Giannakopoulos 1994). It is the personal subjective analysis of the many dimensions of life (Guyatt

et al. 2007; Strine et al. 2008), the manner in which they are conducted and internalized (Guyatt et al. 2007; Strine et al. 2008), the value felt for life (Strine et al. 2008, Bandura 1997) and the overall impact on life (Hong and Giannakopoulos 1994; Revicki et al. 2000). Factored into this subjective overview of life are the living conditions encountered on a daily basis, including role functioning (domestic or employed), community and social interactions (Bowling 1991), economic, political and environmental factors (Bowling 1991; Revicki et al. 2000), mental hardiness and general outlook on life (Hong and Giannakopoulos 1994; Bowling 1991). As such, quality of life comprises different components. It includes, at the very least, the physical, mental, emotional, social and spiritual dimensions commonly associated with personal health (Hong and Giannakopoulos 1994; Revicki et al. 2000). However, it also incorporates the more complex areas of life, such as a person's values, judgments and preferences (Crosby et al. 2003), cultural mores (Guyatt et al. 2007), self-efficacy, locus of control, motivation (Bandura 1997) and resource availability (Hong and Giannakopoulos 1994; Bandura 1997).

Quality of life can be explained on a continuum, varying from extremely high to extremely low (Revicki et al. 2000; Gill and Feinstein 1994). It can, therefore, be viewed as negative or positive (Guyatt et al. 2007; Strine et al. 2008; Crosby et al. 2003). A negative quality of life is detrimental to a person's existence and a state that elicits a sense of dissatisfaction (Bowling 1991; Revicki et al. 2000), lack of purpose (Guyatt et al. 2007; Bandura 1997) and general uncertainty (Strine et al. 2008; Bandura 1997). The priority of life, in this case, is to continue living. The more extrinsic comforts of life (higher-level employment, financial security, etc.) are commonly overshadowed by the basic necessities of life (adequate food, shelter, safety). A positive quality of life, however, reflects satisfaction with one's life and the direction in which it is moving. An individual with a perception of life quality as high would live with an understanding that regardless of how destructive world events may be, or how individual hardships create difficulties, life is still viewed as good and prosperous (Hong and Giannakopoulos 1994; Strine et al. 2008; Bandura 1997). It is the feeling that life has a high value and is generally good (Guyatt et al. 2007; Strine et al. 2008; Bandura 1997). It is possessing the social standards that benefit both the self and society (Bandura, 1997).

According to Goffman (1963: 3), social stigma is an "attribute that is deeply discrediting" and a process of devaluation of a person who possesses a deviant attribute. In essence, it is a perception within a society that any variances from the norms in that society are to be closely scrutinized or deemed unacceptable (Harvey 2001; LaBel 2008). Stigmas originate from normative standards that have evolved over time in each established society (Kurzban and Leary 2001; Major and O'Brien 2005). The actual process of stigmatization, then, is having a predetermined negative evaluation of anyone with different attributes (LeBel 2008). The elements of labelling, stereotyping, discrimination, loss of social status (Kurzban and Leary 2001; Mak and Poon et al. 2007), social ostracizing (LeBel, 2008) and fear (Link and Phelan 2001), as well as unfamiliarity with social, political and economic practices among cultures (Major and O'Brien 2005; Shih 2004), constitute the basis of stigmatization.

The impact of stigmatization is vast. Stigmatized groups, when compared with non-stigmatized groups, generally have an increased risk for both mental and physical health problems (Link and Phelan 2001). The cumulative effect of the stress response (physiological, cognitive, emotional and behavioural) stands at the forefront when discussing stigmatization and the long-term impact on a person's health (LeBel 2008). According to Miller and Kaiser (2008), it is the cognitive appraisal (i.e., identifying a situation as serious and threatening, and considering resources available for coping) of the situation that is essential to how the stigmatized person reacts to the associated stress. If this appraisal is negative, results often include lowered self-esteem, social withdrawal (Miller and Kaiser 2008), depression (LeBel 2008), anger, frustration, exclusion (Kurzban and Leary 2001; Smith 2002) and feelings of inferiority (Major and O'Brien 2005). However, there are individuals who may actually thrive in a stigmatizing situation. In this case, individuals look upon being stigmatized as a motivator to accomplishing their task. They use an empowering model of behaviour (i.e., focus on their value, enhance interpersonal skills and increase assertiveness) to deal with the stigmatization

rather than a coping model (i.e., constantly adjusting to the adversity). It is living with an internal resiliency to channel energy toward the positive aspects of life and not succumb to the stigmatization (Shih 2004). As related to quality of life, stigmatization creates disadvantages in the many domains of life. Employment, personal relationships, housing (Link and Phelan 2001), self-esteem (Major and O'Brien 2005), healthcare and education (Miller and Kaiser 2001) are all usually negatively impacted by exposure to stigmatization.

Migration is moving from one country, region or place of residence to another location. Migration can create adverse effects. The hardship of moving; feelings of isolation, ridicule and being ostracized in the new setting; and adjusting to the social and economic conditions in the new environment can easily create a life filled with distress and declining mental health for migrants (Bhugra and Becker 2005). In general, migration is a move from the comfortable and routine to a state of unfamiliarity regarding language, societal values, expectations and social support systems. Concomitantly, as these changes occur due to migration, the quality-of-life level for migrants typically diminishes (Bhugra 2004). The long-term effect of the constant stress response steadily reduces the quality of life by reaching the core of bodily functioning.

China has the largest mobile population in the world (Li et al. 2006). There were about 147 million rural-to-urban migrants who work and live in urban areas of China (China National Bureau of Statistics, 2006). As the majority of migrants have not received work skills training and only 13% have completed high school education, they frequently undertake manual labour for goods transportation, construction work, domestic services and restaurant services (Zhang 2001). As droves of rural labourers rush into the cities, job opportunities become saturated and many migrants cannot find the employment they dreamed of (Li 1993; Wang 1995). Rural migrants face significant challenges in cities because they are far from their home village, with inadequate income and the absence of a permanent household registration in their host cities (Anderson et al. 2003). In addition, relocating to a densely inhabited, unfamiliar city requires extensive investments of time to reestablish social networks and may have an impact on the migrant's physical and psychological well-being.

A literature search reveals that few studies have examined quality of life among the migrant population. The current study attempted to fill this research gap by comparing social stigma and quality of life between rural-to-urban migrants and their rural counterparts. We addressed three primary research questions: (1) What is the level of quality of life (QOL) among rural-to-urban migrants compared with their rural counterparts? (2) Do rural-to-urban migrants perceive a higher level of social stigma than their rural counterparts? (3) Is there an association between social stigma and quality of life after controlling for socio-demographic factors? Based on previous research, we hypothesized that a higher level of social stigma would predict a lower perceived quality of life.

Methods

Participants and Sampling Procedures

The data used in this analysis were derived from a larger comparative study on mental health among Chinese populations (Li et al. 2009). There are two samples of participants in this study. The migrant sample (N = 1006) was recruited in Beijing and the rural sample (N = 1020) was recruited from eight provinces from which 75% of the migrant sample originated. Beijing is the capital city of China, with a permanent population of 13 million. According to government statistics, there were more than 3 million rural-to-urban migrants (69% males and 31% females) in Beijing in 2003, the majority between 18 and 40 years of age (Beijing Bureau of Statistics 2003).

The rural-to-urban migrant sample was recruited in 2004–2005 in Beijing, China, using the occupational cluster-based "quota sampling" scheme to ensure the representative nature of the migrant sample (Li et al. 2004). According to 2003 government statistics of migrant employment, five occupational clusters employed 82% of rural-to-urban migrants in Beijing (i.e., construction, hotel and restaurant, wholesale and retail, manufacturing, and domestic service and other service sectors).These five occupational clusters were selected as the sampling frame for rural-to-urban migrants in the current study. The number of participants recruited in each occupational cluster

was approximately proportionate to the overall estimated distribution of migrants in the cluster. In addition, the sampling was also stratified by gender to match the overall gender distribution of the migrant population in Beijing. Eligibility criteria for participation in the study included: (1) between 18 and 40 years of age; (2) born in a rural area and registered as a permanent rural resident; (3) worked in Beijing without a permanent Beijing residence; and (4) had been physically present in Beijing for at least one month. The local research teams used workplaces (store, shop, club, office, factory, construction site) as the sampling units. Streets were used as the sampling units for migrants who did not have fixed workplaces (such as repairmen, street vendors). Once a sampling unit was identified and selected according to the pre-established sampling scheme, employers (or managers) at the sampling unit were contacted for permission to conduct the survey on their premises. Upon receiving permission, the interviewers randomly approached eligible rural-to-urban migrants at the sampling unit. This process was repeated until target numbers of sampling units or numbers of participants in each sampling stratum were reached. To prevent over-sampling of migrants from any single sampling unit, the number of migrants recruited from any unit was limited to 50. This sampling process yielded a final sample of 1006 rural-to-urban migrant workers from 34 sampling units. These sampling units, stratified by occupational cluster, were spread across 10 large geographic locations (e.g., downtown areas, business districts, major streets and suburban townships) in two central urban districts, two "near" suburban districts and two "outer" suburban districts/counties in Beijing.

Rural residents were recruited using multiple-stage cluster sampling. Once the migrant sample was recruited, their home provinces of origin were tallied. While the migrant sample in the current study originated from 25 provinces across mainland China, 75% of the sample came from eight provinces (Hebei, Henan, Sichuan, Jiangsu, Anhui, Shangdong, Hubei and Hunan). These provinces were selected as the first sampling stratum for the rural residents. The proportion of rural residents recruited from each province was set to be approximately equal to that of the migrant sample that originated from the same province. The county within each province served as the second sampling stratum. A total of 34 counties were selected from these eight provinces (range from one to 11 counties per province with an average of 4.25 counties per province). The rural village within each county served as the third sampling stratum. A total of 63 villages were selected from the 34 counties (range from one to four villages with an average of 1.85 villages per county). Outreach strategies employed to identify counties/villages included referrals from local government or direct personal contacts with village leaders. Once permission was granted by the village leaders to conduct the survey in their areas, the research team randomly approached rural residents in villages. Rural residents were eligible to participate if they (1) lived in a rural area with permanent rural residency; (2) had stayed in the hometown for at least one month; and (3) were between 18 and 40 years of age. To prevent over-sampling of rural residents from any village, the number of rural residents recruited from any village was capped at 30.

Survey Procedures

Once an eligible individual was identified in a sampling unit, trained interviewers provided the individual with a detailed description of the study design and the consenting procedure and invited her or him to participate in the survey. Eligible individuals who agreed to participate and provided informed consent were asked to complete a self-administered questionnaire. Similar questionnaires (except for some minor differences in the demographic section) were used for rural-to-urban migrants and rural residents. Questionnaires were pilot-tested for comprehension and appropriateness of language prior to administration. A questionnaire typically took about 45 minutes to complete. Participants completed it individually or in a small group (3 to 5 people) at workplaces, homes or other locations they preferred. Participants were paid the equivalent of 4 US dollars for their participation. The study protocol was approved by the Institutional Review Boards at Wayne State University in the United States and Beijing Normal University in China.

Measures

Demographic characteristics. Participants' age, sex, ethnicity, education level (i.e., illiterate, elementary school, junior high school, high/technical school, college or above) and marital status (i.e., never married, married, divorced, remarried and widowed) were collected. Information was also collected regarding monthly income and family economic status (i.e., rich, general, poor and very poor). In bivariate or multivariate analysis, responses were grouped into three categories for education (elementary school or below, junior high school and senior high school or above) and marital status (never married and ever married). Because only 3% of participants were of non-Han ethnicity, these ethnic groups were collapsed into a single category (i.e., non-Han). Participants were also asked to self-rate their overall health status on a 5-point scale (very poor, poor, fair, good and very good). Due to the low frequency in "very poor" and "poor" categories, the response was grouped into four categories: poor (very poor/poor), fair, good and very good, with a higher score indicating a better health status.

Social stigma. The questionnaire contains 18 items to measure social stigma encountered by participants during their work and life (e.g., I am viewed negatively by mainstream society; I feel that society views me as an inferior being). These items were adapted from a published stigmatization scale (Harvey 2001). All items were presented on a 4-point Likert scale (1 = "strongly disagree" to 4 = "strongly agree"). Three subscales were created with 17 items retained through running exploratory factor analysis: discrimination, prejudice and exclusion; internal consistency (Cronbach alpha) was 0.80,[1] 0.79 and 0.52, respectively.

Quality of life. Quality of life was measured by the abbreviated version of the WHOQOL assessment (The WHOQOL Group 1998), a self-report scale consisting of 26 items divided into four subscales including physical health, psychological health, social relationships and environment. All items were presented on a 5-point Likert scale (1 = "very unsatisfied" to 5 = "very satisfied"). The internal consistency for physical health, psychological health, social relationships and environment was 0.68, 0.73, 0.62 and 0.78, respectively.

Analysis

First, descriptive statistics were calculated for socio-demographic variables, social stigma and quality of life (QOL). The differences of these variables between rural-to-urban migrants and their rural counterparts were tested using chi-square (for categorical variables) or analysis of variance (for continuous variables).

Second, QOL was categorized into three classes: low, medium and high. Bivariate association of QOL with socio-demographic variables and social stigma was examined using chi-square (for categorical variables including gender, ethnicity, education, marital status, family economic status and health status) and ANOVA (for continuous variables including age, social stigma and monthly income). An exploratory factor analysis was used to extract distinct factors for the social stigma scale.

Third, multiple linear regression analysis was performed to examine the combined effects of socio-demographic variables and social stigma on QOL. This analysis is used to estimate the relationship between a continuous dependent variable and a set of explanatory variables. An important advantage of this analysis is that we can compare standardized coefficients to assess the relative strength of each predictor. The dependent variables of multiple regression analysis were QOL score. Variables identified as significantly associated with the dependent variables at $p < .05$ in the bivariate analyses were included in the model. Standardized coefficients were calculated. All statistical analyses were performed using the SAS 9.1.3 statistical software package (SAS Institute Inc., Cary, NC).

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[1] Cronbach alpha is one of the most commonly reported reliability estimates. It is used to estimate the proportion of variance that is systematic or consistent in a set of test scores. For example, a Cronbach alpha of 0.80 means that the measure of discrimination is 80% reliable.

Results

Socio-demographic Characteristics

Data on 1006 migrants and 1020 rural residents were collected in 2004–2005. The socio-demographic characteristics of participants are shown in Table 1. The mean age of the sample was about 27 years (range 18–40 years). Nearly two thirds of participants were male. The majority were of Han ethnicity (96.9%). Seventy-two percent of participants had received no more than a junior high school education. Nearly half had never been married. The average monthly income was 790.8 Yuan, equivalent to 100 US dollars at the time of survey. Only 5% of participants reported that their family was rich. More than two thirds said their health status was very good or good.

Table 1. Demographic characteristic of Chinese rural-to-urban migrants and their rural counterparts

Variables	Overall (*n* = 2026)	Migrants (*n* = 1006)	Rural residents (*n* = 1020)	*p*
Age	27.1 (6.5)	25.4(6.2)	28.8 (6.4)	< .0001
Sex				
Male	64.0%	33.1%	38.8%	.0081
Female	36.0%	66.9%	61.2%	
Ethnicity				
Han	96.9%	96.5%	97.4%	.2616
Non-Han	3.1%	3.5%	2.6%	
Education[†]				
Elementary school or below	15.1%	10.2%	20.1%	.0004
Junior high school	57.0%	61.8%	52.2%	
Senior high school or above	27.9%	28.0%	27.8%	
Marital status				
Never married	45.5%	61.3%	29.9%	< .0001
Married or divorced	54.5%	38.7%	70.1%	
Family economic status[a]				
Rich	4.7%	3.6%	5.8%	.0216
Middle class	80.8%	80.8%	80.7%	
Poor or very poor	14.5%	15.6%	13.5%	
Monthly income (Yuan)	790.8 (618.8)	979.6 (703.4)	604.0 (449.9)	< .0001
Health status[a]				
Very good	33.6%	36.5%	30.8%	.0472
Good	36.8%	35.1%	38.5%	
Fair	25.7%	24.3%	27.1%	
Poor or very poor	3.9%	4.1%	3.7%	

Note. Numbers in parenthesis are standard deviations.
[a] Cochran-Mantel-Haenszel statistics.

Compared with their rural counterparts, rural-to-urban migrants were younger and had received more education. Higher proportions of migrants than their rural counterparts had never been married (61.3% vs. 29.9%, $p < .001$) and reported that their family was poor or very poor (15.6% vs. 13.5%, $p < .05$). Higher proportions of migrants were female (66.9% vs. 61.2%, $p < .01$) and considered that their health status was very good (36.5% vs. 30.8%, $p < .05$) compared with rural residents. Migrants had a higher monthly income than rural residents (703.4 vs. 449.9 Yuan) (Table 1).

Social Stigma and Quality of Life

The average social-stigma scores for all the participants were 12.1 (discrimination), 14.6 (prejudice) and 8.0 (exclusion). There was a significant difference in total social stigma score between migrants and their rural counterparts. Migrants scored higher than rural residents (35.5 vs. 33.6, $p < .001$). In addition, there were significant differences in two of three domains of social stigma between migrants and rural residents (Table 2).

The average QOL scores for all the participants were 26.0 (physical health), 20.4 (psychological health), 10.7 (social relationship) and 23.7 (environment). There was significant difference in total QOL score between migrants and their rural counterparts; migrants scored lower than rural residents (79.2 vs. 81.9, $p < .001$). In addition, there were significant differences in four domains of QOL between migrants and rural residents (Table 2).

Association between Social Stigma and Quality of Life

Table 3 depicts bivariate association of QOL with demographic variables and social stigma. Social stigma and its three domains were negatively associated with QOL. Personal income, education, family economic status and health status were positively associated with QOL. Female participants reported a higher level of QOL than males. In addition, age, ethnicity and marital status were not associated with QOL.

To further examine how social stigma and social-demographic factors are associated with QOL simultaneously, we performed multivariate regression analyses. As shown in Table 4, social stigma was negatively associated with increased QOL. The multiple linear regression analysis confirmed the bivariate analysis (Table 3) that personal income, family economic status and health status were positively associated with increased QOL. Furthermore, residential status was significantly associated with QOL. Migratory status was negatively associated with increased QOL. The variables most strongly associated with QOL were social stigma and health status. The results of multiple linear regression analysis indicated that one unit increase in social stigma score resulted in a decrease of 0.36 in QOL score, and one unit increase in health status resulted in an increase of 0.29 in QOL score (standardized coefficients were -0.36 and 0.29, respectively), assuming that other socio-demographic variables held constant. In addition, age, sex and education were not significant predictors of QOL in the final model.

Discussion

Data in the present study confirm and expand the findings from earlier studies. Consistent with the literature, our results provide strong evidence in favour of our hypothesis that social stigma is negatively associated with quality of life (Major and O'Brien 2005; LeBel 2008; Link and Phelan 2001). Social stigma may impact migrants' quality of life through its negative effects on employment, housing, self-esteem, health care, self-efficacy and mental health (Major and O'Brien 2005; Miller 2001; Ghazinour et al. 2004). In addition, our results suggest that rural-to-urban migrants experienced a higher level of social stigma in the urban areas and perceived a lower level of quality of life than their counterparts who live in rural areas.

Inconsistent with prevailing findings in the literature (Bonicatto et al. 2001; Sabbah et al. 2003), we found in our stratified analysis (i.e., within migrants) that male migrants on average perceived a higher level of social stigma in urban areas than female migrants. Furthermore, male migrants reported a significantly poorer quality of life. This confirms previous studies concerning the associa-

tion between depression and quality of life (Bonicatto et al. 2001). One reason for this gender difference in social stigma might be due to the fact that men usually take major responsibility for all aspects of their family in China and are more likely to be discriminated against by urban dwellers and communities through their contacts in search for jobs and other social activities. Therefore, their chances of being stigmatized increase compared with those of women.

Table 2. Social stigma and quality of life among migrants and their rural counterparts

Variable	Overall	Migrants	Rural residents	*p*
Social stigma				
Discrimination	12.1 (4.2)	12.6 (4.3)	11.6 (3.9)	.0001
Prejudice	14.6 (4.6)	15.1 (4.7)	14.1 (4.4)	.0001
Exclusion	8.0 (2.4)	8.0 (2.5)	8.1 (2.4)	.4034
Total score	34.6 (8.3)	35.5 (8.4)	33.6 (8.2)	.0001
Quality of life				
Physical health	26.0 (3.7)	25.5 (3.7)	26.4 (3.7)	.0001
Psychological health	20.4 (3.5)	20.2 (3.6)	20.7 (3.3)	.0028
Social relationship	10.7 (2.1)	10.4 (2.2)	11.0 (1.9)	.0001
Environment	23.7 (5.0)	23.2 (5.3)	24.1 (4.8)	.0003
Total	80.6 (11.6)	79.2 (12.2)	81.9 (10.8)	.0001

Note. Numbers in parenthesis are standard deviations.

Consistent with previous research (Li et al. 2006), our study found that migrants perceived or experienced a higher level of social stigma in the urban areas than their counterparts who live in rural areas. Migrants are stigmatized in cities because of their attributes (e.g., dressing, talking, local accent and farmer habits) (Bhugra 2004; Li et al. 2006). Data from the current study suggest that rural-to-urban migrants perceived lower quality of life than their rural counterparts, after adjusting for potential socio-demographic confounders. Migrants typically leave their homes to improve their economic status and increase their life opportunities in urban areas. However, most of them had received no more than a high-school education. Finding a job and living in an unfamiliar place along with the experience of social stigma and discrimination generates stress, which further affects their quality of life.

Previous studies have shown that personal income and family economic status are positively associated with QOL (Li et al. 2007). Data in the present study indicate that migrants make more money in urban areas than their rural counterparts. However, migrants perceived a lower level of QOL. This may be because migrants' perceived social stigma overwhelms the effects of a relatively small income increase on QOL. Despite stigma and discrimination, most migrant workers in China and their families are financially better off than they had been pre-migration (Li et al. 2006). Migrants' economic gains may mitigate the effects of stigmatization and migrants may choose to stay and work in urban areas. Education is not associated with QOL in this study, perhaps because of the small variation of education (most migrants had received no more than a high-school education). Although data in the present study indicate that QOL is not associated with sex, age and marital status, these relationships need further examination in future studies.

Table 3. Bivariate association of quality of life with demographic variables and social stigma

Variable	Level of quality of life			*f* & χ^2	*p*
	Low (1) (score 33–75)	Medium (2) (score 76–85)	High (3) (Score 86–117)		
Social stigma					
Total score	39.3 (7.6)	34.6 (7.7)	31.0 (7.7)	144.2	.0001
Discrimination	14.0 (3.8)	12.2 (4.0)	10.7 (4.1)	88.2	.0001
Prejudice	16.9 (4.4)	14.4 (4.3)	13.0 (4.3)	109.7	.0001
Exclusion	8.6 (2.3)	8.1 (2.4)	7.5 (2.4)	25.5	.0001
Age	27.4 (6.5)	28.2 (6.6)	27.7 (6.4)	2.2	.1160
Monthly income (Yuan)	748.3 (486.1)	802.2 (612.8)	848.1 (798.4)	3.3	.0375
Gender					
Female	28.6%	37.8%	34.9%	10.7	.0047
Male	71.4%	62.2%	65.1%		
Ethnicity					
Han	98.1%	96.9%	96.5%	3.0	.2251
Non-Han	1.9%	3.1%	3.5%		
Education[a]					
Elementary school or below	20.8%	15.5%	12.3%	12.2	.0005
Junior high school	55.2%	58.1%	58.6%		
Senior high school or above	24.0%	26.4%	29.1%		
Marital status					
Never married	44.2%	34.6%	39.6%	2.3	.1265
Married or divorced	55.8%	65.4%	60.4%		
Family economic status[a]					
Rich	3.0%	4.6%	6.7%	37.6	.0001
Middle class	74.5%	84.8%	83.0%		
Poor or very poor	22.5%	10.6%	10.3%		
Health status[a]					
Very good	19.8%	30.6%	47.4%	156.2	.0001
Good	34.9%	36.0%	38.4%		
Fair	37.7%	30.3%	13.2%		
Poor or very poor	7.6%	3.1%	1.1%		

Note. Numbers in parenthesis are standard deviations.
[a] Cochran-Mantel-Haenszel statistics.

Table 4. Multiple linear regression model of quality of life among rural-to-urban migrants

Variables	Un-standardized coefficient		Standardized coefficient	
	β	SE	*p*	β
Social stigma	-0.49	0.03	< .0001	-0.36
Residential status (migrants vs. rural residents)	2.67	0.58	< .0001	0.12
Age	-0.06	0.04	.1864	-0.03
Gender (female vs. male)	-0.49	0.56	.3856	-0.02
Education	-0.58	0.42	.1699	-0.03
Monthly income	0.18	0.04	< .0001	0.11
Family economic status (Poor = 1 to rich = 3)	2.66	0.64	< .0001	0.10
Health status (poor = 1 to very good = 4)	3.96	0.32	< .0001	0.29

Note. Dependent variable is quality-of-life score; Model fit $f = 74.9$, $p < .0001$ and $R^2 = 0.30$.

There are potential limitations in this study. First, despite efforts to ensure the representativeness and comparability of the samples, our study sample remains a convenience sample of rural-to-urban migrants and rural residents, which limits the generalization of findings to migrants and their rural counterparts from other areas of China. Second, cross-sectional data in the current study prevent causal interpretation of the findings. Longitudinal research is needed to explore the causal relationship between social stigma and quality of life. Third, because quality of life in various life domains was assessed with a self-report questionnaire, there may be recall bias in this study. Fourth, one subscale of social stigma had low internal consistency estimates (Cronbach alpha 0.52). Future studies are needed to develop more reliable psychometrical measures of this construct to improve the internal validity of the findings. Finally, some individual, interpersonal and community factors (e.g., coping resources, social support) that may contribute to differences in QOL between the two populations were not included, and this may limit our ability to interpret the findings.

Notwithstanding these potential limitations, this study represents one of the first efforts to examine QOL among rural-to-urban migrants using validated scales among community-based samples in China. The results from this study have significant implications for health promotion programs to improve the quality of life of rural-to-urban migrants. First, migrants have made a major contribution to China's industrial development and economic growth in the past decades. However, their contributions are not well recognized by the society. They are frequently marginalized in urban areas and are targets of discrimination (Li et al. 2007). Future interventions should seek to improve public attitudes to rural-to-urban migrants and generate action to eliminate stigma, discrimination and prejudice. Second, future research is needed to identify individual characteristics that are associated with increased social stigma among rural-to-urban migrants in order to develop effective stigma-reduction strategies. Finally, pre-migratory training with a focus on establishment of effective coping skills may help migrants to overcome negative consequences of stigma and to live healthy, productive lives.

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