Original Article

# Association between sociodemographic, psychosocial, lifestyle factors, and self-reported health among migrant laborers in China

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## Abstract

*Background*: There were 245 million migrants in China in 2013, the majority of whom migrated from rural to urban areas. Thus, the purpose of this study was to investigate the association between sociodemographic, psychosocial, and lifestyle factors, and self-reported health (SRH) in Chinese migrant laborers.
*Methods*: This study was conducted based on data from the China Labor-force Dynamics Survey 2012. SRH was measured in a single item, although there were other risk factors from three different groups: sociodemographic, psychosocial, and lifestyle factors. The associations between these risk factors and SRH were tested using multilevel logistic regression analyses including interaction tests.
*Results*: All three groups of factors were explored simultaneously. These factors included age, working hours, marital status, illness, and hospitalization, which were associated with poor SRH, as well as earnings, number of friends, relations with neighbors, trust level, education, and alcohol consumption, which were associated with good SRH. However, there was minimal association found between the two factors of medical insurance and nationality, and SRH.
*Conclusion*: Our investigation indicated that there are many factors associated with SRH. In particular, this study undertook a comprehensive investigation of the associations between sociodemographic, psychosocial, lifestyle factors, and SRH in China, the results of which could better inform medical researchers and governments from a Chinese perspective.
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*Keywords:* Chinese migrant laborers; lifestyle factors; psychosocial factors; self-reported health; sociodemographic factors

## 1. Introduction

Since 2010, China has become the world's second largest economy. The middle-class population has been increasing dramatically in China's big cities, whereas the majority of rural residents remain financially impoverished.[1] The average income of Chinese farmers is one-fourth of that made by urban residents; this wide gap between the average incomes of urban and rural residents led to the migration of a large number of rural laborers into the city. According to the Chinese National Bureau of Statistics, although the average income (2609 yuan per month) of these migrant laborers in Chinese cities is considerably higher than the income earned by rural farmers, it remains relatively low compared to that of urban residents. However, such migrant employment provided extra jobs to increase the household income, which prompted these people to become migrant laborers (or nong-min-gong in Mandarin).

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China ranks among the countries with the largest migrant laborer populations in the world. The majority of the Chinese workforce consists of rural migrants, who are those special groups doing physical work under the household registration system. An earlier survey of Chinese migrant population[2] provides the definition of the migrant laborers: those who have been absent from rural locations for more than 6 months, although their registered permanent residence remains in rural areas. A unique institution was established in 1958, which effectively constrained citizens of specific areas in China through residency permits.[3] Since China thereafter implemented reform policy and "opened up" to the world in 1978, the volume of international migration and internal migration has been rising steeply. In this study, we primarily focus on internal migration within China.[4,5] Migration has become one of the most significant phenomena over the past few decades.[3] A survey of China's National Health and Family Planning Commission shows that the country is experiencing the most massive population movement in history, from 6 million in the 1980s to 245 million in 2013. This has been accompanied by a period of rapid development of urbanization, which results in a sustained growth of the migrant laborer population in subsequent years. Overall, this information suggests that there is one migrant worker for every six people in China.[6]

The large-scale migrant populations and their associated issues attract great interest from the social sciences community. Among several studies, some contrasted the differences between migrants and nonmigrants in certain areas, whereas others examined the variation of factors across groups of migrants. These investigations included studies focusing on the informal urbanization process that occurs in mass migrants,[7] the social status among migrants in urban areas,[8] migrant living conditions,[9,10] and possible solutions.[11] Health condition is a key determinant that includes ample relevant factors among migrant laborers due to societal and economic development in China. Exploring the health status of migrants is important to promote disease prevention, health promotion programs, and the delivery of appropriate health and social services to the migratory population. Health status has an influence on the incomes of migrant laborers because migrants have to reduce their working days or even forego working when health problems arise.

Self-reported health (SRH) is considered to be a valuable source of data on various aspects of general health.[12,13] In fact, it is one of the most widely used indicators of health status in survey research, and is recommended by the World Health Organization.[14] SRH can be influenced by individual determinants such as sociodemographic, psychosocial, and behavioral factors.[15–18] The association between sociodemographic factors and SRH was reported in previous research studies.[19] Epidemiological research has also found the exposure ratio of social variations in psychosocial factors.[20,21]

The social support network or the interpersonal relationship is considerably more important for the migrant population. One study explored the function of Social Support in the Mental Health of Migrant laborers in China, which examined migration stress, particularly in matters of financial and employment difficulties.[22] In 2008, a China migrant cross-sectional study ($n = 475$) claimed that the 73 migrant workers would be classified as mentally unhealthy (25% for men, 6% for women),whereas the female migrant laborers who experienced increased stress were more likely to rate their health as poor.[23] Moreover, foreign studies have shown that SRH is a crucial and strong predictor of morbidity and mortality.[12,24,25] In particular, Idler and Benyamini[12] found that the association between SRH and mortality even adjusts to prevalent diseases and some health behavior factors.

Some surveys have indicated that healthcare service utilization of migrant laborers is far lower than that of the local residents. The health infrastructure is unable to provide adequate healthcare for migrants in China.[11] Moreover, one 2014 survey examined the influence of health-related quality of life and health service utilization in Chinese female migrant laborers, which showed that the factors (e.g., bodily pain, general health, role physical) were associated with more frequent health service utilization in female migrant laborers.[26] However, the latest survey showed that 11% of the laborers will never use healthcare services, and 65% of the migrants will conduct self-treatment.[27] So migrants have to sometimes personally finance their healthcare.[4]

Most of the previous studies examined only a few factors, and focused on a very limited area in China about health risk factors of migrant laborers.[22,23,28] Although these studies have proven the existence of differences, some of these studies have no exact test to support their conclusions. Moreover, few studies have focused on migrant laborers within the context of a more comprehensive cross-sectional study. Therefore, the current study explored the nature and strength of the association between migrant health and SRH as varied by different risk factors.

The purpose of the present study was to explore the associations between sociodemographic, psychosocial, and lifestyle factors and SRH among male and female migrant laborers in China.

## 2. Methods

This study was conducted based on the data of China Labor-force Dynamics Survey 2012 (CLDS 2012), wherein the underlying data were collected through questionnaire survey. The results in this article are shown on the basis of a secondary analysis of these survey data. The basic sampling design used in all provinces was a multistage, random approach. The data used in this study were obtained from the CLDS 2012, as conducted in 29 provinces of Mainland China. This survey is nationally representative, in multistage clusters, stratified, with probability proportion to size (PPS) sampling and a sample size of 16,253 study participants ranging in age from 16 years to 65 years.

SRH was measured according to the following question: "In general, what do you think about your health?" The variable was dichotomized into good health (very good/good, coded 0), and poor health (fair/bad/very bad, coded 1).

Three groups of potential risk factors of SRH were studied: sociodemographic, psychosocial, and lifestyle factors.