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Original Research

Differences in the health–age profile across rural and urban sectors: a study on migrants and non-migrants in China

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ABSTRACT

Objectives: The objective of this study is to examine age–health differentials between migrants and non-migrants in the context of migration in China.

Study design: We use nationally representative data from the China Labor-force Dynamics Survey to analyze the relationship between age and health across different migration status groups.

Methods: We used a comprehensive measure of perceived health from factor analysis and structural equation models to take multiple dimensions of subjective health into consideration.

Results: We found a difference in the association between age and health (net of controls) at age 46 years and above but not for younger age groups. That is, there is a health disadvantage between those who had ever migrated and urban non-migrants in older adulthood but not for young adulthood. However, the age–health profile of rural ever-migrants is not different from that of rural non-migrants.

Conclusions: These results highlight the effect of migration on health at different ages, which reflects the toll that migration takes on health over time. Our results imply that researchers should take into consideration life stages when examining the migration–health nexus. We also argue that there are potential influences related to China's long-standing division between rural and urban sectors.

Introduction

Migration is a challenging process, which may take an accumulated toll on the migrant's health and lead to a distinct age–health profile compared with non-migrants. Owing to the 'healthy people migrate effect,'[1] migrants' health often peaks when they initiate migration.[2,3] However, their health status might experience a more accelerated decline than non-migrants because of features of the migration experience,

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such as long work hours and dangerous, physically demanding, and low-status occupations.

A large body of research on the 'health–migration' nexus has demonstrated the so-called 'migrant health paradox'[4] whereby (im)migrants experience comparable, or even superior, health outcomes relative to native-born people even though they have lower socio-economic status and limited healthcare access.[5,6] To explain this phenomenon, some research maintains that in addition to many other factors, health status is an important selection factor influencing who migrates. Hence, migrants are often found to be heathier than their non-migrant counterparts from the place of origin, which has been deemed the 'healthy people migrate effect.'[1] Others found evidence of 'salmon bias' or selective return migration of those facing health challenges.[7,8,9] However, little research has examined the migration–health nexus from a life-stage perspective. Therefore, it is important to showcase this idea empirically with data including all groups: including migrants and non-migrants in both places of origin and destinations.

We set our case study in China, a country which experienced dramatic social and economic changes in the past few decades including large-scale rural-to-urban migration, which reached a total of 261 million movers in 2010.[10] It represents an interesting case study not only because of large-scale migration but also due to rapid economic development and associated health challenges, such as industrial pollution, growing obesity related to the adoption of Western diet, and other health risks associated with rapid urbanization.[11] Few studies examining the migration and health nexus in China consider health disparities between migrants and non-migrants at different ages; often age is treated only as a control variable. For example, Chen[12] examined health disparities at migration destination and found an overall health advantage for migrants in a large Chinese city. Similar findings have also been found in Wen et al.'s[13] work, which compared migrants with Shanghai natives. Tong and Piotrowski[14] compared the health status of rural-to-urban migrants with rural non-migrants, but only at young ages (i.e. 16–35 years). Chen, Chen, and Landry[15] showed that environmental hazards caused by China's rapid industrialization are particularly detrimental to rural-to-urban migrants. None of these studies took into consideration that health disparities between migrants and non-migrants change across working ages.

We draw on a nationally representative sample from the China Labor-force Dynamics Survey (CLDS) to study the association between age and health comparing rural-to-urban migrants with rural and urban non-migrants. The backdrop of our study is China's unique institutional context that maintains a rigid division between rural and urban sectors and continues imposing barriers to population movement that deny migrants access to basic amenities at their place of destination.

Theoretical background

Migration status and cumulative disadvantage on health

The association between age and health can be understood from the perspective of *cumulative disadvantage* theory, which describes a process of gradual accumulation of hardships that accrue over a lifetime. This perspective argues that health differentials start to form in young adulthood, which ultimately leads to widening health disparities at older ages (most likely beginning at middle age, i.e. in the 40s) across different social classes.[16] Rooted in human development theory, the idea is that initial disadvantages in childhood or early life are susceptible to the cumulative depreciation of health status over time as individuals move through a sequence of developmental stages. Several studies reveal that early and sustained hardships lead to adverse health outcomes, including higher rates of mortality and disability in later life,[17] higher prevalence of obesity, hypertension, cardiovascular disease, etc.[18,19,20]

Previous studies also have shown that earlier adverse labor market outcomes, such as unemployment and labor market inactivity, could lead to health disadvantage in later life,[21] which can be applied to labor migrants. Most migrants start their migration journey in their late teens or in early adulthood when their health status is generally high. However, the migration experience often exposes them to adverse working and living conditions because of their lower level of earnings in the place of destination, which is accompanied by migration-related stress. Despite that migration may be financially rewarding, in the sense that it increases earning ability, migrants often do not use the money to promote their own well-being. Instead, migrants often send money back to their place of origin for their left-behind family members, or they accumulate money for later use.[22,23] As a result, these detrimental factors to health may not be easily perceived at younger ages but accumulate at older ages.

A number of studies found that compared with non-migrants, migrants are positively selected on health, despite being socio-economically disadvantaged,[1,2,3] as individuals with poor health are unlikely to be able to endure the rigors of the migration journey.[24] Potential migrants anticipate the need of good health because migration often involves working in difficult, dangerous, or demanding working environments in the so-called 'secondary sector,' characterized by low-paying, unstable, and low-prestige jobs.[25] Therefore, in the early stages of the migration journey, migration streams are often composed of young people with good health.[26] Although health status generally decreases with age for the entire adult population across all social classes, it likely does so more considerably for migrants. As physical capital is often the only asset migrants have at their disposal to compete with workers in the migrant destination (especially in the early years of migration), the deleterious effect of physically demanding work is particularly acute for labor migrants. In the meanwhile, they also minimally invest in their health maintenance. When they are young, migrants can better cope with the adverse influences on their health. As they grow older, however, their health reservoir declines, and some health signals and chronic diseases start to manifest in themselves.[27] As a result, their health status may decline at an accelerating pace, compared with other groups. In addition, the migrants' health disparity relative to other groups over the migration period could be further manifested due to different healthcare benefits they can receive in some receiving society. Therefore, it is important to situate the health–migration nexus in a specific

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