

Social Welfare: Interdisciplinary Approach 2025, vol. 15, pp. 175–196

eISSN 2424-3876

DOI: https://doi.org/10.15388/SW.2025.15.10

# Between Reform and Reality: Social Marginalization and Public Health Challenges for Migrant Farmers in Rural China

# Hengyu Wang

Vilnius University Šiauliai Academy, Šiauliai, Lithuania
Nanjing University of Posts and Telecommunications School of Sociology
and Population Studies, Nanjing, China
E-mail: hengyu.wang@sa.stud.vu.lt
https://orcid.org/0009-0002-2289-8432
https://ror.org/03nadee84

Abstract. Migrant farmers in China face severe social marginalization and public health challenges. Through participant observation and 52 semi-structured interviews, this study explores the structural factors and the systemic contradictions between their social marginalization and public health challenges. The findings reveal that inadequate reforms of the household registration system (the hukou system) and the political tasks in agriculture jointly shape the social marginalization of migrant farmers. The insufficiencies of the public health system in addressing migrants' everyday healthcare needs highlight the relationship between identity and an exclusionary healthcare supply, harming their health and exacerbating potential risks. While reforms in social health insurance have improved the overall coverage, they have failed to fully address issues of underinsurance, marginalized status, and healthcare accessibility, thus leaving the structural inequality of migrant farmers' healthcare unresolved. Moreover, their marginalized identity significantly impacts their mental health, as they endure persistent discrimination and disciplinary power, which poses long-term risks to their well-being. This study provides valuable insights into the mechanisms of social marginalization and public health challenges faced by migrant farmers in China.

**Keywords:** Social marginalization; public health; migrant farmers; China.

Recieved: 2025-03-31. Accepted: 2025-10-10

Copyright © 2025 Hengyu Wang. Published by Vilnius University Press. This is an Open Access journal distributed under the terms of the Creative Commons Attribution 4.0 (CC BY 4.0) License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

## Introduction

The massive influx of rural migrants has been a crucial driver of China's modernization and economic prosperity (Rawski, 2011). However, the discriminatory *hukou* (household registration) system, a powerful mechanism of population control, has long restricted the mobility and basic rights of the rural population. Although migration has become more feasible since the reforms in the 1980s, key rights, such as full citizenship and social welfare, remain largely inaccessible at the migrants' destination. Within the fragmented social security framework, nearly 300 million rural migrants continue to face structural challenges, including economic inequality, exclusion from public services, limited access to healthcare, widespread discrimination, unequal access to education, and mental health risks. These institutionalized forms of segregation significantly affect migrants' health and social integration (Keung Wong, Li, & Song, 2007; Chan, 2019; Sun, Chen, & Xie, 2022; National Bureau of Statistics, 2024). Undoubtedly, migrants are systematically excluded, which results in them experiencing severe social marginalization (Fluit, Cortés-García, & von Soest, 2024).

As a minority group within the migrant population (National Bureau of Statistics, 2024), migrant farmers are often overlooked in both society and academic research. Most migrant farmers originate from economically underdeveloped rural areas and relocate to more developed rural or agricultural regions in order to engage in agricultural production, thus providing the market with cheap agricultural products. Some have even successfully established competitive cross-border agricultural trade networks (Yi et al., 2020). Yet, despite their economic and market success, they remain 'strangers in the village' due to the *hukou* system and systemic social segregation (Luo & Luo, 2011; Li & Yin, 2023).

Compared to China, international studies on migrant farmers are more prevalent. In the United States, migrant agricultural workers face challenges rooted in racial and identity-based discrimination but eventually transition into farmer identities, redefining the relationship between migration and land (Minkoff-Zern, 2018). Similarly, Sweden's migrant farmers exhibit vulnerabilities, including health risks and a lack of resources (Grubbström & Joosse, 2021). In Spain, migrant farmers play a vital role in sustaining and transforming the food system while also providing evidence of the intersection between the migrant farmer and the migrant worker identities (Zimmerer et al., 2020). Across these studies, 'identity' remains a key focus, especially concerning marginalization and instability. However, what differentiates China is that the *hukou* system permanently records migrants' identities in digital databases, thus reinforcing the state control and making these identities difficult to change (Ren, 2023). Unlike other migrant groups (Sun, Chen, & Xie, 2022), most migrant farmers cannot acquire rural *hukou* in their destination areas, which prevents them from integrating into local society and benefiting from local welfare programs.

This entrenched marginalization exposes migrants to significant health risks. The structural lack of medical resources negatively impacts the health of middle-aged and elderly migrants (Sun & Yang, 2021), while mobility and social isolation contribute to severe mental health issues (Zhong et al., 2018). More critically, migrants are at a higher risk of HIV infection due to low awareness and inadequate prevention efforts (Huang et al., 2015; Qin et al., 2021). During the COVID-19 pandemic, social assistance programs largely excluded migrants (He, Zhang, & Qian, 2022), reinforcing their isolation from public health services through both medical insurance and social welfare systems. Although the government has attempted to reform the system by integrating urban and rural medical insurance so that to mitigate the severe health consequences of excessive labor (Chu, 2021; Xue & Li, 2022), significant disparities persist across regions in healthcare quality, disease coverage, and reimbursement rates.

Social health insurance not only lacks adaptability but also fails to adequately cover and protect the most vulnerable migrant groups (Chen et al., 2022). Female migrants, for instance, face gender-based health neglect, medical discrimination, and exploitative capitalist labor conditions, which further erodes their agency and reinforces their social marginalization (Cao & Wang, 2021). Elderly migrants, despite moving to developed urban areas, remain excluded from public healthcare due to prohibitively high medical costs (Xie, Guo, & Meng, 2021). Migrant children also suffer from exclusion – the 'leftbehind' children face disproportionately high suicide risks and inadequate healthcare services (Jan, Zhou, & Stafford, 2017), while those who migrate with their parents exhibit higher levels of mental health issues and physical health risks compared to urban children attending public schools (Sun, Chen, & Chan, 2015).

Because access to public health services is tightly linked to the *hukou* system, many migrants, upon facing deteriorating health due to harsh labor and living conditions, find returning to their rural hometowns the only viable option to fully utilize their medical insurance and reduce their healthcare costs (Long, Han, & Liu 2020). Despite the government's efforts to improve rural healthcare, the marketization of the public health system has led to a structural shortage of primary healthcare resources and a low standard of medical services (Wang et al., 2019). The resilience and strength of China's authoritarian governance (Wong, 2011) have further suppressed migrants' awareness of their rights to equitable public health services, making them more likely to perceive healthcare access as an individual responsibility rather than a societal one.

The research object focuses on migrant farmers in Nanjing City, China who mostly have relocated from underdeveloped rural regions in the Huai Bei Basin to more developed rural or agricultural areas as farmers, which is consistent with historical social research (Ma, 2011), with a minority coming from nearby rural areas in Nanjing. The research examines the persistent marginalization and public health challenges they face within an unequal social structure.

Although almost all migrant farmers serve the commercial market, they engage in different agricultural types. Four main categories were identified: *Grains & Oils* (G),

Forestry & Fruit (F), Breeding (B), and Vegetables (V). Many migrant farmers engage in one or more of these categories, with the majority operating under the 'family farm' model (Huang, 2022).

The purpose of the study is to uncover the structural inequalities and health risks experienced by this group and to analyze how their migrant identity becomes embedded in, and reinforces their marginalized status, particularly under the intersecting effects of healthcare inequality and mental health risks.

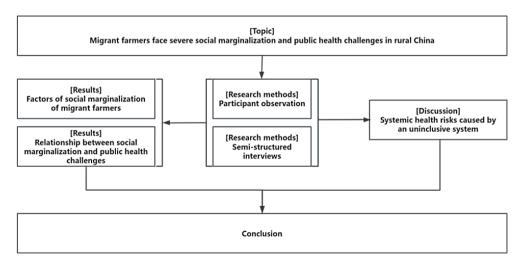
The research questions address the following three core research questions: (1) How is the marginal status of migrant farmers constructed and sustained under unequal institutional structures, and how does this process further expose them to the risk of expulsion? (2) In what ways does the migrant identity influence their choices and behaviors regarding healthcare, and how are these shaped by an inequitable medical system? (3) How does the discriminated migrant identity exacerbate mental health risks among migrants and further entrench their marginalization?

## Research Methods and Materials

# Study Design and Ethical Considerations

This study adopts a qualitative research approach, allowing for an in-depth understanding of the public health conditions and marginalization challenges faced by migrant farmers in their daily lives. This methodological choice provides a solid empirical foundation for future research while facilitating the integration of broader analytical perspectives (Figure 1).

**Figure 1.** *Methodology of the study* 



The researcher conducted in-depth field investigations and observations, while living in the rural area. The researcher mainly employed semi-structured interviews, and the interview outline was constantly adjusted and modified as the research progressed. Meanwhile, participant observation was used to engage with the interviewees' production activities and living conditions, thus facilitating a comprehensive understanding their daily experiences, as the supplementary method.

This study follows the principles of the Declaration of Helsinki and established academic rules and was approved by the School of Sociology and Population Studies, Nanjing University of Posts and Telecommunications in 2023.

#### Data Collection

Between 2023 and 2024, the researcher spent approximately 80 days conducting fieldwork while residing in two villages of Nanjing. This study employed purposive spatial sampling and snowball sampling to identify as many participants as possible in nearby communities. Interviews were primarily conducted at the respondents' workplaces or homes, such as in resting areas or fields, which was determined by the respondents' willingness and timetable.

Before the formal interviews, I would obtain the respondents' consent to use an *iFLYTEK RecorderH1* to record the conversations. If the respondents refused to be recorded, I would record key information in field notes and use them as part of the analysis. The duration of the interviews varied, mainly ranging from 30 to 90 minutes.

Participant observation and semi-structured interviews were conducted simultaneously. Since the interview sites largely overlapped with the participants' living spaces and working environments, they could easily show the researcher their daily spaces and work routines. Their emotions, behaviors, interactions and field provided valuable conditions for observation.

## Sample and Data Analysis

After data processing, two interviews were excluded: one due to the withdrawal without reason, and another interruption citing a lack of relevant information. The study retained 52 valid samples. The primary interviewees were migrant farmers (n=38), while additional respondents included local villagers and migrant traders of agricultural supplies (n=6) (Table 1). Furthermore, six community workers were interviewed, who were full-time workers (not civil servants, hired and elected) in the community (autonomous institutions) (Nanjing Civil Affairs Bureau, 2022), responsible for agriculture and familiar with the situation of migrant farmers. Also, consultations were conducted with two agricultural public institutions (Table 2).

The recordings of the interviews were transcribed by using the *iFlytek Hearing* AI transcription service. All interview data were coded following the principles of **thematic analysis** (Clarke & Braun, 2017). The interview data were systematically analyzed

through node identification, coding, and categorization by using *NVivo* 12 software by the concept-driven coding (Table 3). Field notes generated from participant observation, due to their subjective nature, were not processed through coding software; instead, they served to inform the research direction and supplement the analysis with unstructured contextual insights.

**Table 1.** *Information of interviewed migrants & local villagers* 

Number	Identity	Age	Education	Migration Time (years)	Farming Types	Planting Area (hectares)	Interview Method	Hukou
A1	migrant farmer	50+	Junior high school dropout	15+	F	1.33	Individual	Suqian JS
A2	migrant farmer	40+	junior high school	10+	F	1.00 Group	Suzhou AH	
A3	migrant farmer	45+	junior high school	10+	F		Group	Suzhou AH
A4	migrant farmer	50+	unknown	5+	B/G/F/V	12.06	Individual	Xinyang HN
A5	migrant farmer	65+	junior high school	20+	B/G/F/V	4.66		Suqian JS
A6	migrant farmer	70+	Primary school dropout	unknown	G	0.20	Group	Nanjing JS
D7	local vil- lager	unknown	Uneducated	not applic	not applic	not applic		Nanjing JS
A8	migrant farmer	55+	junior high school	5-				Suqian JS
A9	migrant farmer	55+	unknown	5-	V/F	1.00+	Group	Suqian JS
A10	migrant farmer	30+	unknown	20+	C/P		Group	Suqian JS
A11	migrant farmer	65+	unknown	20+	G/F	7.33+		Suqian JS
A12	migrant farmer	45+	junior high school	10+	G/F	20.00+	Group	Suqian JS
D13	local vil- lager	60+	unknown	not applic	not applic	not applic		Nanjing JS
A14	migrant farmer	50+	Primary school	30+	V	2.67+	Individual	Wuhu AH
A15	migrant farmer	30+	junior high school	5-		1.45	Group	Bengbu AH
A16	migrant farmer	50+	unknown	5-	V	1.47		Bengbu AH

Number	Identity	Age	Education	Migration Time (years)	Farming Types	Planting Area (hectares)	Interview Method	Hukou
B17	migrant farmer	50+	Primary school	25+	V/B/G	1.00+	Individual	Fuyang AH
B18	migrant farmer	50+	junior high school	5+	F	0.47	Individual	Suzhou AH
B19	migrant farmer	55+	Primary school	20+	V/F/B	1.86	Individual	Hefei AH
B20	migrant farmer	55+	Primary school	20+	G	18.67	Individual	Suqian JS
B21	migrant farmer	60+	Primary school	10+	- V	0.67	0.67+ Group	Suqian JS
B22	migrant farmer	60+	Primary school	10+	v	0.07+		Suqian JS
B23	migrant farmer	55+	junior high school	35+	V	0.73	Individual	Lianyg JS
B24	migrant farmer	60+	junior high school	30+	G/V	13.33+	Individual	Yangzhou JS
B25	migrant farmer	45+	Primary school	25+	V/F	5.33+	Individual	Wuhu AH
B26	migrant farmer	45+	unknown	30+	V	1.33+	Individual	Liuan AH
D27	migrant trader	50+	Primary school dropout	20+	not applic	not applic	Individual	АН
B28	migrant farmer	unknown	unknown	20+	F	6.67+	Individual	Nanjing JS
B29	migrant farmer	55+	Junior high school dropout	5+	F	0.67+	Individual	Suqian JS
D30	local vil- lager	55+	unknown	not applic	F	0.33	Individual	Nanjing JS
B31	migrant farmer	50+	junior high school	20+	v	0.67+	Individual	Bengbu AH
B32	migrant farmer	50+	Primary school dropout	5+	V/B	1.07	Individual	Suqian JS
B33	migrant farmer	55+	Uneducated	25+				Liuan AH
B34	migrant farmer	55+	Primary school dropout	25+	V 1	1.33+	Group	Liuan AH
B35	migrant farmer	50+	junior high school	20+	v	1.33+	Individual	Bengbu AH
B36	migrant farmer	50+	Primary school	20+	v	1.47	Individual	Liuan AH
B37	migrant farmer	60+	Uneducated	20+	G	6.67+	Individual	Chuzhou AH

Number	Identity	Age	Education	Migration Time (years)	Farming Types	Planting Area (hectares)	Interview Method	Hukou
B38	migrant farmer	unknown	unknown	5+		15.00	Group	Suqian JS
B39	migrant farmer	45+	junior high school	5+	G			Suqian JS
D40	local vil- lager	unknown	unknown	not applic	not applic	not applic		Nanjing JS
D41	local vil- lager	unknown	unknown	not applic	not applic	not applic	Group	Nanjing JS
B42	migrant farmer	55+	Primary school dropout	25+	G	24.00	Individual	Suqian JS
B43	migrant farmer	50+	Primary school	5+	G/V/B	12.00+	Individual	Suzhou AH
C44	migrant farmer	45+	Undergrad- uate	5+	G/F	16.67+	Individual	Xinyang HN

**Table 2.** *Information of interviewed community worker & public institution* 

Number	Identity	Interview Method	Hukou
G45	community worker	Individual	Nanjing JS
G46	community worker	Individual	Nanjing JS
G47	community worker	Individual	Nanjing JS
G48	community worker	Individual	Nanjing JS
G49	community worker	Individual	Nanjing JS
G50	community worker	Individual	Nanjing JS
G51	public institution	Continuous	Nanjing JS
G52	public institution	Continuous	Nanjing JS

## **Results**

The findings reveal how structural interactions shape the social marginalization of migrant farmers. Building on this, the study examines the relationship between precarious identities and exclusionary healthcare services, the barriers posed by identity constraints in health insurance reforms, and the psychological health risks associated with marginalization. These results highlight the structural inequalities and health risks faced by migrant farmers.

**Table 3.**Coding table of migrant farmers

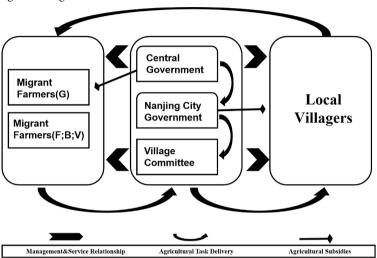
Code Name	Source Number	Reference Point	Code Example
Economic integra- tion	37	88	The village bought us agricultural insurance. 2) The state subsidies for growing grain and oil crops are given to the growers; and the land subsidies in Nanjing are given to the local villagers.
Political rights	29	64	We are not important, we just do what we are supposed to do. We are like slaves. We are not locals. They can tear down my things if they say they are not up to standard. 2) We have no representatives in the community. Even if we have representatives, it would be a waste of time and useless. We would still like to have representatives in places where there are benefits.
Labor situ- ation	28	36	1) Sometimes I work until 11 PM or 12 AM, sometimes until 1 AM. I come to work at 6 AM at the latest, and the earliest off is 10 PM. 2) I have to work 16 hours a day, and I have to eat and rest in the remaining 8 hours.
Living environ- ment	31	62	The mobile home has air conditioners and refrigerators, and the water heater uses solar energy. 2) They don't allow us to live in the greenhouse, require us to rent a house, and don't allow us to use liquefied gas. They call our broadband line 'illegal construction'. We use night stools as toilets, and bury excrement in the ground.
Daily medi- cal care	24	35	There are free health checks for the elderly. The community didn't call us, but locals registered. 2) I have many chronic diseases. My legs hurt so much that I can't work. It hurts when I walk. I'm taking government medicine now. I checked my feet twice last year.
Health insurance	23	30	1) I can't buy medical insurance here, so I bought it in my hometown.  Because it's very convenient to register for medical insurance in other places, I can get reimbursement directly at the hospital here. There are still reimbursement ratios of 40% and 50%, and there are specific reimbursement regulations. 2) Farming is hard work, for example, medical insurance is the lowest level, and rural people have the lowest level.
Mental health	31	88	1) (Feeling of instability) Of course there is, what can we do? Right? I can see that the leaders here seem to discriminate (us), it's not too obvious, but I can see that we don't get any good things. 2) The locals don't discriminate, they are quite nice to us, that's great. They also hope that we can work here, because, without us, the local land would be abandoned.

# The Construction of Social Marginalization and the Expulsion of Migrants

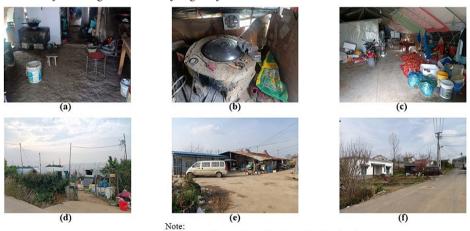
Political and economic factors serve as the primary push-pull forces influencing migration patterns (Urbański, 2022). Analyzing economic integration is essential to understanding how migrant farmers endure social marginalization. Their deep economic integration is not solely based on conventional agricultural market dynamics but is also shaped by the political tasks of grain and oil cultivation, and the central government's strong emphasis on grain and oil production, which includes subsidies for grain cultivation (State Council General Office, 2005; State Council General Office, 2020). At the same time, local governments and communities rely on migrant farmers to fulfill state-mandated grain production targets. Additionally, many local villagers have long abandoned farming, thereby creating dependence on migrant farmers to

cultivate farmland, which is an essential condition for obtaining farmland subsidies from the Nanjing Municipal Government (Nanjing Municipal People's Government, 2015) (Figure 2).

**Figure 2.** *Economic integration diagram* 



**Figure 3.**Overview of the living environment of migrant farmers



All photos by author, 2023-2024, with participants' consent, and sensitive information has been blurred.

- (a). Poor quality greenhouse housing without hardened ground;
- (b). Traditional kitchen stove in the greenhouse;
- (c). Hardened ground, storage, iron huts for accommodation with built-in air conditioning, etc;
- (d). Living greenhouse with good quality and environment;
- (e). Mobile homes and brick houses;
- (f). Public toilets near migrant housing.

Despite their deep economic integration, migrant farmers continue to face structural exclusion at the system. Without access to local rural *hukou*, they are unable to 'purchase' residential land or houses, making it difficult to secure stable, healthy, and safe housing. As a result, their living conditions are often poor, of substandard quality.

Migrant farmers engaged in grain and oilseed cultivation do not need to worry about crop theft and typically rent rural houses. However, those involved in other types of agriculture must live near their fields to oversee crops, and therefore they live in greenhouses and mobile homes; usually, this facilitates farming, and helps manage transportation. Since farmland cannot be paved, those residing in greenhouse structures often face issues such as excessive dust and mud. Constructing a dry toilet (pit latrines) is prohibited, leading some migrant farmers to settle near public toilets (Figure 3).

Most greenhouses and mobile homes are reinforced for durability. Due to high internal temperatures, air conditioning is commonly installed to prevent heat-related health risks and ensure rest quality. These residences also serve as storage spaces, contributing to cluttered surroundings that can emit foul odors after rainfall. Community workers occasionally intervene to ask hygiene improvements. Beyond unsanitary living conditions, migrant farmers also are threatened by extreme weather and housing instability.

"When it snowed heavily, my wife and I worked all night to clear the snow from the vegetable greenhouse. We were tired but did not dare to sleep. At SAM, the greenhouse where I lived was crushed by the snow. When the flood came, I slept in the car for three days and three nights. When I found my home was flooded, I was stunned." (B23)

"We have moved several times. Local people think that our farming will make the house dirty and dislike us. This is a very unstable life. It would be great if we could build our own house, but it is impossible." (B38)

The government should gradually ensure the migratory rights of migrant farmers while organizing inclusive renovations of rural living spaces, respecting the dignity and housing rights of this vulnerable group (Li, Sun, & Li, 2021). However, the government and community continuously demand the removal of greenhouses and mobile homes, by citing concerns over housing safety and land use restrictions (Nanjing Municipal Bureau of Agriculture and Rural Affairs, 2021). The actual difficulties in housing have created instability and greater risks in both production and daily life for migrants, reinforcing their marginal status within the social structure.

Migrant farmers also lack political rights due to the lack of reforms in the *hukou* system. This institutional design has become a systemic force which excludes migrants from political integration. There are no representatives or opinion leaders among migrant farmers in the community. When facing significant risks and claims to their interests, migrant farmers lack channels to access relevant information and have no institutional means to negotiate with the government and community.

"The community workers cut off our agricultural electricity/water and forced us to leave. This is the third time this year, which has seriously affected production. We went to the community workers to solve the problem, but he said three times, "I won't give you any." Now the agricultural water/electricity has been restored, and we are still negotiating. I may give up some land to grow rice." (A14)

Migrant farmers face not only housing problems and political powerlessness but also new agricultural political tasks, which have created expulsion risks for migrant farmers engaged in non-grain cultivation. Despite the positive role this factor played in economic integration, China's complex food security environment has led the central government to demand an expansion of grain planting areas to address potential future food crises. Simultaneously, this has reinforced the management of agricultural land usage, requiring land that could have been used for cash crops to be designated for 'priority' grain cultivation (State Council General Office, 2020; Nanjing Municipal People's Government, 2024). Without political consultation, nearly all migrant farmers engaged in non-grain cultivation were ordered to switch to grain planting or prepare to leave. Switching is extremely difficult. The limited land resources also mean that many migrant farmers have no choice but to leave.

The government has failed to prepare compensatory funds for the relocation plan to offset the investments loss, contractual breaches, and relocation losses incurred by migrant farmers or provide material support for transitioning to grain cultivation. Although, nominally, the government has not forcibly required migrant farmers to relocate, it is promoting the plan by imposing political tasks to increase grain planting areas, placing the responsibility for policy execution on grassroots community workers. Therefore, the author does not view this relocation plan as a normal policy but rather as 'Expulsion'. The government is using policies to expel migrant farmers engaged in nongrain cultivation to complete agricultural political tasks, and migrants find it difficult to oppose or negotiate through institutional channels. This greatly undermines their dignity, property rights, and legal rights.

Acemoglu (2015) explained from an economic perspective the success of inclusive institutions brought by China's reforms. Migrant farmers have achieved political benefits for local governments and communities, as well as economic benefits for villagers, facilitating their economic integration, which also serves as the driving force for agricultural modernization. However, the incomplete reform of the *hukou* system has, with the development of the economy and society, gradually turned into extractive institutions. Migrants are unable to enjoy equal social security and political rights, which leads to unstable living environments with security and health risks. Furthermore, when facing policy-driven expulsions, they have no means to oppose such sudden and harsh decisions. The lack of reform in the *hukou* system, combined with agricultural political tasks, has jointly shaped the structural social marginalization of migrant farmers.

# Social Marginalization and the Provision of Public Health Services

The social marginalization of migrant farmers has led to an unstable, exclusionary, and unjust provision of public health services. At the same time, migrant farmers have developed misconceptions about their labor and health. In their pursuit of economic benefits from land, they also push their own labor potential to the extreme. Their labor input in agriculture is not only intense, often exceeding ten hours a day without weekends off, but also exposes them to significant health risks due to long-term overwork.

Furthermore, the accessibility of quality public health services is poor. The scope of medical insurance is very limited, and the physical distance to healthcare facilities is often overwhelming, making it difficult for migrants to bear the time and financial costs associated with high-quality healthcare. As a result, they are forced to seek basic medical services nearby. This creates a strong supply-demand conflict between the enormous health needs of the unstable migrant farmer population and the limited availability of daily medical care. This issue happens in regions with rich and excellent medical resources, highlighting the exclusion of migrant farmers from quality public health services. In effect, the public health system structurally excludes migrant farmers from high-quality daily healthcare services.

"I am so tired that I am sick all over. If I don't drink, my shoulders hurt so much that I can't lift them. Now I take the painkiller almost every day, brought from the small pharmacy, and then I go to work in the fields." (B23)

"If I am hospitalized here, I can get some reimbursement from my hometown. If I catch a cold or go to a small hospital or clinic here, I have to pay out of my own pocket." (B20)

In the absence of regular healthcare, the high-intensity agricultural labor has caused severe work-related injuries for migrant farmers, with pain and chronic diseases, especially in the joints, being common. A greater potential health risk arises from the lack of health awareness. Public health education can significantly improve the healthcare-seeking behavior of migrant workers (Li et al., 2020), but migrant farmers generally lack health awareness. They tend to focus on short-term economic gains while overlooking health risks, or, due to their marginalized status, face limited accessibility to healthcare resources, forcing them to make difficult health-related choices. A businessman involved in agricultural supplies, who was once part of the migrant farmer group, shared his observations on the health of migrant farmers:

"They are very miserable, who have been working hard for money since they were young. They don't take care of their health, and most don't have regular medical examinations. They're easy to get all kinds of diseases in their fifties. Last year, someone who owed me money died. His debts are gone, and my business is not doing well." (D27)

The exclusionary nature of the public health system has become one of the key factors harming the health of migrant farmers. In addition to the structural insufficiency

of public health service provision, there is also a certain level of indifference and neglect from some communities toward the health of migrants. According to local regulations (Standing Committee of the Nanjing Municipal People's Congress, 2020) and specific practices (Jiangning District Guli Subdistrict Office, 2025), elderly residents aged 60 and above, regardless of their *hukou* status, are eligible for free health checkups, which are crucial for disease prevention and screening. However, many communities selectively ignore elderly migrant farmers in marginalized positions, failing to notify them of registration and appointments. The systemic lack of public health services further strengthens the marginalization of migrants, undermines their health and agency, weakens the public health system's ability to achieve social equity and medical equality, and the unstable, exclusive and unjust health care provision is linked to the social marginalization of migrant farmers.

# Identity Barriers in Social Health Insurance Reform

As we all know, China has a long-standing centralized political tradition. However, its social health insurance schemes are far from unified; each administrative unit, from counties to cities to provinces, maintains its own system, which is closely tied to the *hukou* system. This structure creates significant inequalities in access to social health insurance among citizens, depending on the region and nature of their work. Consequently, the Chinese government aims to focus on completing the following reforms in social health insurance: (1) Integrating the fragmented insurance systems; (2) Expanding the volume-based drug purchasing approach; (3) Expanding the insurance coverage for the reimbursement list. These reforms have made notable progress, but, in practice, many problems remain (Meng et al., 2015; Fang et al., 2021; Xing et al., 2022).

"If it's a serious illness, go home for treatment. The cost in hometown is lower. Here is expensive, just look at minor illnesses." (B17)

"My daughter-in-law has lung cancer. She spent all our money on treatment for four years, almost bankrupted us, and we even ran into debts. Medical insurance does not cover imported drugs (sobbing). We couldn't just let her die... In the end, she died." (B22)

Migrant farmers' non-local identity keeps them in a vulnerable position within the social health insurance system. They are unable to enjoy the same reimbursement levels and coverage as local residents, with their only advantage being easier reimbursement settlements once registered. When facing significant health risks, migrant farmers, driven by economic concerns, may have to forgo high-quality medical resources in Nanjing and instead return to their rural hometowns for medical treatment. In cases of serious illnesses, when needed medications are not covered by insurance, they are often left unprotected by the system. Migrant farmers are forced to either abandon treatment or shoulder heavy medical costs, facing the risks of death or bankruptcy. Their families often bear the burden of substantial debt due to these high medical expenses.

Even after insurance reforms, unstable identities still isolate migrant farmers from local, high-quality healthcare resources. From any angle, the accessibility of medical care for migrants remains a pressing issue, as evidenced in both the earlier analysis and the literature review: (1) Routine daily healthcare services are limited to basic, nearby options; (2) When health deteriorates, returning to their rural hometowns is often seen as the best choice for migrants, but grassroots healthcare resources remain structurally inadequate and services are of poor quality (Wang et al., 2019; Long, Han, & Liu 2020). The reforms have not fully addressed the issues of insufficient insurance, marginalized identities, and healthcare accessibility, thus highlighting the lack of courage, resolve, and inclusiveness in social health insurance reforms. The reforms have failed to fundamentally change the structural inequalities faced by migrant farmers in the medical system.

# Marginal Identities and Mental Health Risks

The marginalized identity of migrant farmers, when confronted with structural exclusion, inevitably causes psychological harm to this group. Even when widespread discrimination is not overt, the underlying harm persists. If we choose to remain indifferent to social injustice and discrimination, it will have tangible negative effects on the health and future of vulnerable groups (Laurin, Fitzsimons, & Kay, 2011). The absence of rights not only undermines the interests of migrant farmers but also subjects their societal role to a perception of being 'deprived', whether imposed by others or self-ascribed.

Social marginalization, in addition to the lack of public health services related to physical health, leads to the erosion of dignity due to incomplete rights. As a symbolically defined group, migrant farmers frequently face psychological harm from being labeled as 'discriminated', 'unstable', or 'inferior'. Discrimination, unstable identities, and excessive labor contribute to greater psychological damage. This social inequality breeds 'learned helplessness', which profoundly impacts the mental health of migrant farmers (Andrews III et al., 2020).

"If something happens, I feel the arrogance of the locals. They think we are outsiders who come to work, or 'who come to beg'. They don't equally treat me as a human being." (A3)

"They look down on us migrants. Basically, 9 out of 10 locals call us outsiders 'Kuazi' behind our backs. Sometimes they will call you 'Kuazi' to our face, but this happens very rarely." (D27)

Discrimination is most directly reflected in the everyday use of language, with 'Kuazi' being the most widespread derogatory term used to refer to migrants. This is confirmed by local villagers. The term 'Kuazi' directly implies that locals view the lifestyle and production methods of outsiders as 'barbaric' and 'crude'. After an interview, a community worker used 'Kuazi' to refer to migrant farmers while discussing work with a colleague. Such discriminatory everyday language constructs a linguistic division

between migrants and locals, a divide that is further reinforced by the 'disreputable' labor conditions, 'dirty' clothing, and 'poor and risky' housing of migrant farmers. However, locals ignore the fundamental cause of migrant farmers' social marginalization: their structurally excluded marginalized identity. Ironically, many locals' ancestors were once migrant farmers themselves (Liu, 2012).

The linguistic segregation represented in everyday life is only the surface-level psychological harm caused to migrant farmers. Discriminatory power managing the marginalized identity of migrant farmers has more profound implications for their daily lives and mental health. Migrants lack the ability to defend their unstable lives and face 'survival anxiety' due to the risk of 'expulsion', which causes deep psychological harm. It is of importance to emphasize that this harm primarily comes from local community workers and the government, rather than from ordinary villagers. Villagers generally show sympathy and acceptance of migrant farmers in broader life contexts. Migrant farmers engaged in grain and oil crop cultivation benefit from political ties with the community and government, facing less risk of discrimination. Other types of migrant farmers, however, face greater survival and psychological pressures.

"It is impossible for us to be respected as outsiders. During the meeting, the village secretary got angry and said to all of us, 'Get out of here', but not anything else. He probably thought we outsiders were difficult to manage." (B36)

"Now the policy requires us to leave. My husband is so worried at home, and we can do nothing. We have been growing vegetables all our lives." (B25)

"Excessive labor, marginalized social status, an unjust public health system, and an identity stripped of agency..." These factors have caused immense psychological harm to migrant farmers. When observing and engaging with them, the author consistently notices that migrants have become adept at passively accepting various pressures and blows from the outside world, to the point of emotional numbness. Their cunning and simplicity are the best reflections of their unstable identity. As the interviews became more profound, their psychological pressure often burst forth, and the author witnessed their toil, illness, and tears.

When a successful migrant farmer (B28) stated, "Engaging in agriculture is looked down upon, farming is the lowest profession", and added, "Even when facing with opportunities for political participation, we cannot, dare not, or won't say anything", the 'learned helplessness' in fighting for their rights is the final result of systemic discipline. Their marginalized identity has severely harmed their mental health. This psychological state will have long-term impacts, solidifying their social marginalization and posing significant potential risks to their health. Similarly, Latinx farmworkers in the United States also face widespread mental health issues, and they tend to relate these issues more to daily life and functionality (Graf et al., 2024). Chinese migrant farmers exhibit a similar tendency when describing mental health problems, but it is evident

that structural issues – namely identity, rights, and the deficiencies in the public health system – lie at the root. Migrant farmers lack the opportunity and experience to participate in public health reforms, which hinders the creation of a truly fair and inclusive public health system, as well as the reduction of psychological harm to them, ultimately impeding the broader goal of improving societal health and well-being.

#### Discussion

This study focuses on the issues of social marginalization and public health challenges faced by migrant farmers. It reveals how the social marginalization of migrant farmers is reinforced by an exclusionary healthcare system, their identity, and flawed social health insurance reforms. Migrant farmers are forced to confront inequitable access to healthcare resources and psychological harm. Despite significant achievements in China's healthcare reforms, existing challenges expose the systemic health risks with incomplete reforms and discriminatory identities, which are undeniably linked to an exclusionary and unjust social structure.

Although research on migrant farmers in China remains limited, its findings align with international studies on the health of migrant agricultural workers. Whether it is Latino farmworkers in the United States or migrant agricultural laborers in Europe, they face challenges such as discrimination, mental health issues, poor housing conditions, inadequate sanitation, and the risk of eviction (Castillo et al., 2021; Urrego-Parra et al., 2022). Similarly, research on migrant farmworkers in Canada highlights how the lack of political power and the threat of deportation undermine their right to adequate housing (Weiler & Caxaj, 2024). On the Thai-Myanmar border, migrants' access to healthcare is shaped by geographical distance and legal status within an exclusionary public health system (Khirikoekkong et al., 2023). Surprisingly, despite the fact that the migrant farmers in this study have not crossed national borders, the household registration system and a fragmented social health insurance system have nonetheless placed them in a position of social marginalization and healthcare precarity similar to that of international migrants.

This study does have certain limitations. First, the study is focused solely on a few rural communities in Nanjing, China, and does not fully reflect the diversity of other agricultural or economically developed regions. Secondly, due to the uncertainty in healthcare behaviors, the study could not track the specific judgments, decisions, and processes through which individual migrant farmers access healthcare, nor did it collect data on their use of 'informal treatment'. Lastly, there is very limited information regarding access to mental health services, which may be linked to the traditional view of mental health services as 'non-essential', and the concentration of mental health resources in urban areas (Xiang et al., 2012). In the next step, the authors may introduce social network analysis (Yousefi Nooraie et al., 2020) in order to reduce limitations

and conduct in-depth and comprehensive research on issues such as medical decision-making and 'informal treatment'.

## Conclusion

The study demonstrates that the social marginalization of migrant farmers is shaped by structural factors such as the lack of reforms in the household registration (hukou) system and agricultural political tasks. Structural social marginalization determines that migrant farmers will endure long-term systemic exclusion from public health services, high-intensity labor without regular health checks or quality healthcare, which damages their health and increases their long-term health risks. Social health insurance reforms have improved the overall health coverage for migrants, but the issue of marginal identity persists. Problems with healthcare accessibility and inadequate insurance remain significant, and, compared to the general population, migrant farmers continue to be exposed to greater health risks. Marginal identity also severely undermines their dignity, subjectivity, and agency. The collective 'learned helplessness', enduring long-term discriminatory harm and power discipline, has a profound impact on their psychological health, with the risk of having long-term negative effects on their health. The inadequacies of the public health system have prevented it from fully promoting social equity and inclusivity, and, to some extent, it has reinforced the social marginalization of migrant farmers.

# Acknowledgements

I dedicate this article to the memory of my grandfather, an honest, brave and socially responsible Chinese farmer, whose life and values have deeply shaped my understanding and emotion of agriculture, rural life, and the experiences of farmers.

I would also like to acknowledge the editorial team, peer reviewers, interviewees, and all others who contributed to this work but cannot be named explicitly. Their guidance and support have been invaluable.

## References

Acemoglu, D. (2015). Why Nations Fail? *The Pakistan Development Review*, 54(4), 301–312. http://www.jstor.org/stable/43831321

Andrews, A. R. III, Haws, J. K., Acosta, L. M., Acosta Canchila, M. N., Carlo, G., Grant, K. M., & Ramos, A. K. (2020). Combinatorial effects of discrimination, legal status fears, adverse childhood experiences, and harsh working conditions among Latino migrant farmworkers: Testing learned helplessness hypotheses. *Journal of Latinx psychology*, 8(3), 179–201. https://doi.org/10.1037/lat0000141

Cao, A., & Wang, M. (2019). Exploring the Health Narratives of Chinese Female Migrant Workers through Culture-Centered and Gender Perspectives. *Health Communication*, 36(2), 158–167. https://doi.org/10.1080/10410236.2019.1669269

Castillo, F., Mora, A. M., Kayser, G. L., Vanos, J., Hyland, C., Yang, A. R., & Eskenazi, B. (2021). Environmental health threats to Latino migrant farmworkers. *Annual Review of Public Health*, 42(1), 257–276. https://doi.org/10.1146/annurev-publhealth-012420-105014

Chan, K. W. (2019). China's hukou system at 60: continuity and reform. In R. Yep, J. Wang & Th. Johnson (Eds.), *Handbook on urban development in China* (pp. 59–79). Edward Elgar Publishing. https://doi.org/10.4337/9781786431639.00011

Chen, Y., Parker, M., Zheng, X., & Fang, X. (2022). Health insurance coverage of migrant workers in China. *The Chinese Economy*, 55(5), 332–342. https://doi.org/10.1080/10971475.2021.199 6550

Chu, L. (2021). Impact of long working hours on health based on observations in China. *BMC Public Health*, 21, Article 1347. https://doi.org/10.1186/s12889-021-11190-0

Clarke, V., & Braun, V. (2016). Thematic analysis. *The Journal of Positive Psychology*, 12(3), 297–298. https://doi.org/10.1080/17439760.2016.1262613

Fang, W., Xu, X., Zhu, Y., Dai, H., Shang, L., & Li, X. (2021). Impact of the national health insurance coverage policy on the utilisation and accessibility of innovative anti-cancer medicines in China: an interrupted time-series study. *Frontiers in public health*, 9, Article 714127. https://doi.org/10.3389/fpubh.2021.714127

Fluit, S., Cortés-García, L., & von Soest, T. (2024). Social marginalization: A scoping review of 50 years of research. *Humanities and Social Sciences Communications*, 11(1), Article 1665. https://doi.org/10.1057/s41599-024-04210-y

Graf, M. D. C., McMahon Bullis, M., Lopez, A. A., Snethen, J., Silvestre, E., & Mkandawire-Valhmu, L. (2024). A qualitative analysis of Latina migrant farmworkers' perception of mental health: Voices from Wisconsin. Journal of Transcultural Nursing, 35(1), 11-20. https://doi.org/10.1177/10436596231207490

Grubbström, A., & Joosse, S. (2021). New entrants in agriculture—the case of young immigrant farmers in Sweden. *European Countryside*, 13(1), 22–37. https://doi.org/10.2478/euco-2021-0002

He, A. J., Zhang, C., & Qian, J. (2022). COVID-19 and social inequality in China: the local–migrant divide and the limits of social protections in a pandemic. *Policy and Society*, 41(2), 275–290. https://doi.org/10.1093/polsoc/puac003

Huang, W., Dong, Y., Chen, L., Song, D., Wang, J., Tao, H., Zaller, N., Zhang, H., & Operario, D. (2015). HIV risk and sexual health among female migrants in China. *Health promotion international*, 31(3), 595–605. https://doi.org/10.1093/heapro/dav049

Huang, Z. (2022). The labor limits and "diligence revolution" in peri-urban couple-run farms in eastern China. *Sociological Review of China*, 10(6), 33–58. https://doi.org/10.3969/j.issn.2095-5154.2022.06.003

Jan, C., Zhou, X., & Stafford, R. S. (2017). Improving the health and well-being of children of migrant workers. *Bulletin of the World Health Organization*, 95(12), 850–852. https://doi.org/10.2471/BLT.17.196329

Jiangning District Guli Subdistrict Office. (2025). *Guli Subdistrict elderly free physical examination reservation announcement.* http://www.jiangning.gov.cn/jnqrmzf/202502/t20250228\_5085731. html

Keung Wong, D. F., Li, C. Y., & Song, H. X. (2007). Rural migrant workers in urban China: living a marginalised life. *International Journal of Social Welfare*, 16(1), 32–40. https://doi.org/10.1111/j.1468-2397.2007.00475.x

Khirikoekkong, N., Asarath, S. A., Munruchaitrakun, M., Blay, N., Waithira, N., Cheah, P. Y., ... & Althaus, T. (2023). Fever and health-seeking behaviour among migrants living along the Thai-Myanmar border: a mixed-methods study. *BMC infectious diseases*, 23(1), Article 501. https://doi.org/10.1186/s12879-023-08482-8

Laurin, K., Fitzsimons, G. M., & Kay, A. C. (2011). Social disadvantage and the self-regulatory function of justice beliefs. *Journal of personality and social psychology*, 100(1), 149–171. https://doi.org/10.1037/a0021343

Li, J., Sun, S., & Li, J. (2021). The dawn of vulnerable groups: The inclusive reconstruction mode and strategies for urban villages in China. *Habitat International*, 110, Article 102347. https://doi.org/10.1016/j.habitatint.2021.102347

Li, M. H., & Yin, F. Z. (2023). "Strangers" in the village: An ethnographic study of migrant Han Chinese farmers in Jilin border villages. *Northwest Ethnic Studies*, 3, 134–142. https://doi.org/10.16486/j.cnki.62-1035/d.20230614.002

Li, X., Yang, H., Wang, H., & Liu, X. (2020). Effect of Health Education on Healthcare-Seeking Behavior of Migrant Workers in China. *International Journal of Environmental Research and Public Health*, 17(7), 2344. https://doi.org/10.3390/ijerph17072344

Liu, Y. W. (2012). Conflict and integration between hosts and guests in the Jiangnan region during the late Qing and early Republic of China: A case study of Jurong County, Jiangsu. *Historical Review*, 2, 128–137. Retrieved from https://d.wanfangdata.com.cn/periodical/Ch9QZXJpb2RpY2FsQ0hJTmV3UzIwMjUwMTE2MTYzNjE0Eg9zaGlsaW4yMDEyMDIwMTMaCHM4Z2t4Mmxz

Long, C., Han, J., & Liu, Y. (2020). Has Rural-Urban Migration Promoted the Health of Chinese Migrant Workers? *International Journal of Environmental Research and Public Health*, 17(4), Article 1218. https://doi.org/10.3390/ijerph17041218

Luo, Y. R., & Luo, G. Q. (2011). Behavioral motivations, characteristics, and income analysis of suburban land-renting farmers. *Contemporary Economics*, 11, 34–35. https://doi.org/10.3969/j.issn.1007-9378.2011.11.014

Ma, J. (2011). The Sacrificed "Local": A Study on Social-Ecological Transformation in the Huai Bei Region (1680–1949) (pp. 403–430). Peking University Press. (Original work published in Chinese)

Meng, Q., Fang, H., Liu, X., Yuan, B., & Xu, J. (2015). Consolidating the social health insurance schemes in China: towards an equitable and efficient health system. *The Lancet*, 386(10002), 1484–1492. https://doi.org/10.1016/S0140-6736(15)00342-6

Minkoff-Zern, L. A. (2018). Race, immigration and the agrarian question: farmworkers becoming farmers in the United States. *The Journal of Peasant Studies*, 45(2), 389–408. https://doi.org/10.1080/03066150.2017.1293661

Nanjing Civil Affairs Bureau. (2022). Response to Proposal No. 0207 of the Fifth Session of the 14th CPPCC Nanjing Municipal Committee: Suggestions on stabilizing the community worker team. Nanjing Municipal People's Government. https://www.nanjing.gov.cn/xxgkn/jytabljggk/2022njytabl/shizxta/202212/t20221202 3774547.html

Nanjing Municipal Bureau of Agriculture and Rural Affairs. (2021). Announcement on the release of the reporting hotline for the "retrospective" special cleanup and rectification action on "greenhouse housing" issues. https://nyncj.nanjing.gov.cn/njsnywyh/202106/t20210617\_2971227.html

Nanjing Municipal People's Government. (2015, July 30). *Notice on issuing the interim measures for farmland protection subsidies in Nanjing* (Ning Zheng Gui Zi [2015] No. 18). https://www.nanjing.gov.cn/zdgk/201508/t20150807\_1056658.html

Nanjing Municipal People's Government. (2024, April 12). Measures for ensuring grain security in Nanjing (Government Decree No. 347). https://www.nanjing.gov.cn/zdgk/202404/t20240419 4212579.html

National Bureau of Statistics. (2024, August 8). 2023 Migrant Worker Monitoring and Survey Report. https://www.gov.cn/lianbo/bumen/202405/content\_6948813.htm

Qin, F., Liang, B., Liang, H., Abdullah, A. S., Huang, H., Huang, J., ... Ye, L. (2021). High HIV prevalence, low awareness of and willingness to use HIV pre-exposure prophylaxis among male mi-

grant workers in Southwestern, China: a short report. AIDS Care, 33(6), 760–766. https://doi.org/10.1080/09540121.2021.1877249

Rawski, T. G. (2011). Human resources and China's long economic boom. *Asia policy*, 12, 33–78. https://www.jstor.org/stable/24905046

Ren, Z. (2023). The double-edged sword of digital governance in China: can digital governance enhance the legitimacy of authoritarian regimes?. *IDE Discussion Paper*, No 891, [1–21]. https://econpapers.repec.org/paper/jetdpaper/dpaper891.htm

Standing Committee of the Nanjing Municipal People's Congress. (2020). *Nanjing City Pension Service Regulations*. https://www.njrd.gov.cn/xxfb/sjfg/202002/t20200210\_1979307.htm

State Council General Office. (2005). *Notice on "Opinions on improving direct subsidies for grain farmers"* (Cai Jian [2005] No. 59). The Central People's Government of China.

State Council General Office. (2020). Opinions of the General Office of the State Council on preventing the "non-grain conversion" of farmland and stabilizing grain production (Guo Ban Fa [2020] No. 44). https://www.gov.cn/zhengce/content/2020-11/17/content 5562053.htm

Sun, N., & Yang, F. (2021). Impacts of internal migration experience on health among middle-aged and older adults—Evidence from China. *Social Science & Medicine*, 284, Article 114236. https://doi.org/10.1016/j.socscimed.2021.114236

Sun, X., Chen, J., & Xie, S. (2022). Becoming Urban Citizens: A Three-Phase Perspective on the Social Integration of Rural–Urban Migrants in China. *International Journal of Environmental Research and Public Health*, 19(10), Article 5946. https://doi.org/10.3390/ijerph19105946

Sun, X., Chen, J., & Xie, S. (2022). Becoming urban citizens: a three-phase perspective on the social integration of rural-urban migrants in China. *International Journal of Environmental Research and Public Health*, 19(10), Article 5946. https://doi.org/10.3390/ijerph19105946

Sun, X., Chen, M., & Chan, K. L. (2015). A meta-analysis of the impacts of internal migration on child health outcomes in China. *BMC public health*, 16, 1–11. https://doi.org/10.1186/s12889-016-2738-1

Urbański, M. (2022). Comparing Push and Pull Factors Affecting Migration. *Economies*, 10(1), Article 21. https://doi.org/10.3390/economies10010021

Urrego-Parra, H. N., Rodriguez-Guerrero, L. A., Pastells-Peiro, R., Mateos-Garcia, J. T., Gea-Sanchez, M., Escrig-Pinol, A., & Briones-Vozmediano, E. (2022). The health of migrant agricultural Workers in Europe: a scoping review. *Journal of immigrant and minority health*, 24(6), 1580–1589. https://doi.org/10.1007/s10903-022-01330-y

Wang, L., Wang, Z., Ma, Q., Fang, G., & Yang, J. (2019). The development and reform of public health in China from 1949 to 2019. *Globalization and health*, 15, Article 45. https://doi.org/10.1186/s12992-019-0486-6

Weiler, A. M., & Caxaj, C. S. (2024). Housing, health equity, and global capitalist power: Migrant farmworkers in Canada. *Social Science & Medicine*, 354, Article 117067. https://doi.org/10.1016/j.socscimed.2024.117067

Wong, L. (2011). Chinese Migrant Workers: Rights Attainment Deficits, Rights Consciousness and Personal Strategies. *The China Quarterly*, 208, 870–892. https://doi.org/10.1017/S0305741011001044

Xiang, Y. T., Yu, X., Sartorius, N., Ungvari, G. S., & Chiu, H. F. (2012). Mental health in China: challenges and progress. *The Lancet*, 380(9855), 1715–1716. https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(11)60893-3/fulltext

Xie, Y., Guo, Q., & Meng, Y. (2021). The health service use of aged rural-to-urban migrant workers in different types of cities in China. *BMC Health Services Research*, 21, 1–11. https://doi.org/10.1186/s12913-021-06638-3

Xing, Q., Tang, W., Li, M., & Li, S. (2022). Has the volume-based drug purchasing approach achieved equilibrium among various stakeholders? Evidence from China. *International journal of environmental research and public health*, 19(7), Article 4285. https://doi.org/10.3390/ijerph19074285

Yi, F., Gudaj, R.T., Arefieva, V., Mishchuk, S., Potenko, T.A., Yanbykh, R., Zhou, J. and Zuenko, I. (2020). How Chinese agricultural immigrants affect farmers in the Russian Far East. *The American Journal of Economics and Sociology*, 79(5), 1387–1415. https://doi.org/10.1111/ajes.12361

Yousefi Nooraie, R., Sale, J. E., Marin, A., & Ross, L. E. (2020). Social network analysis: An example of fusion between quantitative and qualitative methods. *Journal of Mixed Methods Research*, 14(1), 110–124. https://doi.org/10.1177/1558689818804060

Zengxin, X., & Bowei, L. (2022). The impact of the integration of urban and rural medical insurance on migrant workers' overwork: evidence from China. *Frontiers in Public Health*, 10, Article 934524. https://doi.org/10.3389/fpubh.2022.934524

Zhong, B. L., Liu, T. B., Chan, S. S. M., Jin, D., Hu, C. Y., Dai, J., & Chiu, H. F. K. (2018). Common mental health problems in rural-to-urban migrant workers in Shenzhen, China: prevalence and risk factors. *Epidemiology and psychiatric sciences*, 27(3), 256–265. https://doi.org/10.1017/S2045796016001141

Zimmerer, K. S., Jiménez-Olivencia, Y., Ruiz-Ruiz, A., & Porcel-Rodríguez, L. (2020). Agri-Food Land Transformations and Immigrant Farm Workers in Peri-Urban Areas of Spain and the Mediterranean. *Land*, 9(12), Article 472. https://doi.org/10.3390/land9120472