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WHERE IS HOPE IN OLD AGE?
A STUDY OF CHINESE MIGRANT WORKERS' MIGRATION EXPERIENCE AND WELL-
BEING

by

JING LIU

Under the Direction of Heying Jenny Zhan PhD

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2021

ABSTRACT

China has been undergoing massive rural-to-urban migration in the past four decades. As of 2019, there are approximately 300 million migrant workers in China's labor force, which accounts for approximately 20% of its entire population. However, policy makers and society as a whole have paid insufficient attention to migrant workers' well-being. This dissertation examines the relationship between Chinese migrant workers' migration experiences and their well-being into aging and retirement. Using a sample of 1,083 migrant workers from three Chinese emigration provinces (Anhui, Sichuan, and Henan) in a quantitative dataset and 30 follow-up interviews, this dissertation examines: (1) factors of migration experience that affect migrant workers' health and healthcare, (2) factors influencing migrant workers' retirement savings, and (3) the structural relationships between migration experience, hopefulness toward retirement, self-rated health, and overall retirement planning. Quantitative findings of this dissertation revealed that longer work experience and lower income are negatively associated with their poorer health; Having higher income, better social support network, and being hopeful for retirement are positively correlated with having retirement savings. Qualitative findings revealed the social context of the cumulative disadvantages that rural migrant workers experience because of their social status as rural residents. The non-transferable healthcare and retirement benefits associated with rural migrant workers' social status resulted in their poor health and reduced chance of retirement saving. Continued cultural belief in intergenerational support led to migrant workers' reduced chance of savings for retirement. Yet, having hope for retirement and confidence in retirement insurance system resulted in increasing participation of migrant workers in social insurance. This dissertation sheds light on the understanding of the interactions between urbanization, population aging, and the Chinese cultural expectations. It

adds to the existing literature by linking migration and urbanization with social policies and cultural expectations for migrant workers' aging and retirement in rural China.

INDEX WORDS: Migrant workers, Retirement, Cumulative disadvantage

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May 2021

DEDICATION

To my families, friends, classmates,
who taught me love, courage, persistence, tolerance, wisdom and sent me tremendous amount of
love and support in the process of finishing this dissertation.

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Working on this dissertation has been an interesting and unforgettable experience. This dissertation would not be possible to finish without millions of supports, care, and love from my beloved families, mentor, professors, and friends. I want to express my deepest and sincere gratitude to all of them.

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1 INTRODUCTION

China is undergoing two dramatic demographic changes—urbanization and population aging. From 1980 to 2019, China's urbanization rate rose from 18.62% to 60.31% with its urban population increasing from approximately 190 million to 843 million (World Bank, 2019). It is projected that the urbanization rate in China will reach 75% by 2030 (World Bank, 2019). This process has taken roughly 400 years in the U.K. (De Vries, 2006, p. 17) and 130 years in the U.S. (Boustan et al., 2013). China's urbanization process is among the fastest in modern history.

The massive rural-to-urban migration fueled the process of rapid urbanization in China. A primary contributor to the emergence of the rural-to-urban migration was the Chinese farmland reform of the 1980s (Liang, Chen, & Gu, 2002). In the 1950s, China's agriculture operated under a collectivization system, within which farmers were organized by local production teams and worked on the same schedule collectively. Farmers under the collectivization system were not earning wages for work, instead, they received equal distributions of the gains from the production. Shortly after the Economic Reform was launched in 1979, China's agricultural collectivization system collapsed and was replaced by the household responsibility system, within which farmers were allowed to lease farmland from the state and work for themselves. They could either sell crops to make profits or lease it to others for yearly rent (Kelliher, 1992, p. 49). Because of the policy change as well as a wider adoption of smart farming technology nationwide, a large number of farmers who used to be strictly bounded in the collectivization system were set free for more opportunities in the labor force (Lin, 1988; Chan, 2001).

Meanwhile, rapid economic development in urban areas have created urgent demand for laborers (Zhao, 1999). With the hope of making more earnings, many rural surplus laborers left

their farmlands and migrated to urban areas for better job opportunities. Considering their unique characteristics in the process of urbanization, these migrant workers are referred to as *nong-min-gong* in Chinese, or “rural-to-urban migrant worker” in English. Rural-to-urban migrant workers constitute a large population in China. According to the National Bureau of Statistics of China (2019a), China has approximately 300 million migrant workers in 2019, accounting for approximately 20% of its entire population and 35% of the entire Chinese labor force. For decades, the well-being of migrant workers has fallen between cracks of the urban and rural social stratification system in China, as policy makers and society as a whole have paid insufficient attention to it.

The urban/rural stratification system is also referred to as the household registration system (*hukou*), similar to the “permanent residence” status in the U.S., which grants individuals the right to employment benefits, medical insurance, housing allowance, social welfare, and education within a registered area (usually the city, town, and village of birth) (Solinger, 1999; Chan, 2012). The associated social benefits are strictly restricted within individuals’ registration cities or provinces and are not portable as individuals migrate to other cities or provinces. As a result, migrant workers from rural China, even though they work and reside in cities, do not enjoy the same benefit as their urban counterparts because their birth places (hence household registration) are in rural areas.

Even if the social benefits were portable, the social benefits in rural areas are by no means comparable to those in urban areas. Urban employed individuals in China enjoy comprehensive welfare benefits of retirement pensions, healthcare, and educational resource for children (Chan & Zhang, 1999; Liu, 2005). In rural China, on the other hand, there had been no pension, nor medical care benefits for rural residents before 1990s (Shen & Williamson, 2010).

Children, especially girls, in rural China tend to withdraw early from schools in order to work to help parents make livings (Li, 2004). This rural-urban dichotomy is China's fundamental social stratification system that creates and accumulates advantages and disadvantages for people living in urban and rural areas (Bian, 2002; Wu & Treiman, 2004).

Another dramatic change in China's demographic landscape is driven by population aging. In 2000, China's population was 1.27 billion, with 7% of the population at age 65 and older; by 2030, the population is predicted to be 1.46 billion, and 16% of the population will be age 65 and older (U.S. Census Bureau, 2000). Population aging is at an even greater scale among the migrant worker population. As of 2019, 49.4% of the migrant population are 50 or older (National Bureau of Statistics of China, 2019b). Since most migrant workers work in short-term manual jobs for private firms without work contracts and their retirement age is not clearly articulated by state laws and regulations, it is common that many migrant workers stop working and return to rural homes at about age 50 due to their declining health; yet many, if not most, are never able to afford retirement (Xu, Guan, & Yao, 2011). In this particular social context of China, how has the processes of urbanization and population aging affected the lives and well-being of migrant workers? Has the migration experience impacted their current and future well-being, such as their health status and retirement planning?

To answer these questions, this dissertation is designed to examine the effect that migration experience has brought on both the migrant workers' health and retirement planning using a sample from three emigration provinces: Anhui, Sichuan, and Henan. To be more specific, this dissertation aims to address the following research questions: Does migration experience positively or negatively affect migrant worker's health status and retirement

planning? What are the influencing factors and what are the potential pathways that shape migrant workers' well-being when they are approaching retirement?

In this dissertation, I have chosen the 3-article format to examine the relationships between Chinese migrant worker's migration experience and their well-being. The first article focused on factors of migration experience that affect migrant worker's self-rated health and healthcare. The second article focused on factors that influence migrant worker's retirement savings. The third article extended the first and the second article by further examining the structural relationships between migration experience, self-rated health, hopefulness toward retirement, and overall retirement planning. The three articles combined together contribute to the existing body of literature by exploring the relationship between migration, health status, and retirement planning, thus providing a formative understanding of the current and future well-being of the Chinese migrant workers.

2 STATEMENT OF RESEARCH PROBLEM

Chinese migrant workers are known as the “floating population” in China, emphasizing the characteristics of their transient and unstable social status in urban areas. The majority of Chinese migrant workers work long hours in manual jobs with substandard conditions that most urban residents are not willing to take (Wong & Lee, 2003; Zhu et al., 2014; Xie et al., 2015). These jobs are known as the “3D” jobs featuring its characteristics for dirty, dangerous, and demanding, such as construction, manufacturing, or restaurant type jobs. Previous research has shown that Chinese migrant workers, on average, work nine hours longer per week as compared to their urban counterparts but they receive only 76% of urban resident's average pay (Gao et al., 2012). With limited pay, they are desperately struggling to make a living in the cities. As a marginalized group, they also suffer from discrimination (Lee, 2012; Liu et al., 2014; Wang et

al., 2015), poor housing quality (Wu & Wang, 2002; Wang et al., 2010), and dangerous working conditions (Zhang, 2012; Zhu et al., 2014), all of which result in severe health consequences and serious concerns regarding their retirement planning.

Besides the negative experience at the individual level, the lack of the transferable hukou-based social benefits and a universal social security system also contributes to migrant workers' hardship and poses challenges to their retirement planning in China (Lee & Meng, 2010; Zhang, 2010). Rural residents generally are covered by a non-contributory low pension benefits plan, similar to the Supplemental Security Income (SSI) in the U.S. Migrant workers who do not participate in defined contribution pension scheme receive only 88 RMB/12 U.S. dollars per month after age 60. This meager social security or pension is likely to give them a poor and bleak future if without large private savings (Shen & Williamson, 2010; Fang & Feng, 2018). After working for 2-4 decades in urban China, will migrant workers able to afford retirement? The concept of "retirement" has rarely existed in China. For thousands of years, Chinese farmers have always relied on their adult children for old-age security. When this traditional practice of filial piety is confronted with major structural changes due to urbanization, major social problems arise: Is the traditional practice of filial piety sustainable when adult children are gone to work in urban areas as migrant workers retire and return home? Have aging migrant workers' work experiences in urban China earned their chances to a retire in rural China? How does the Chinese tradition of filial piety clash with the social structural changes as a result of urbanization? These questions are not only social problems confronted by individual migrant workers at the micro-level; but also, macro-level puzzles that call for sociologists, economists, policy makers, and social workers, to work together to find solutions.

3 THEORETICAL FRAMEWORK

Three theoretical frameworks as shown in figure 1— the political economy of aging theory (Estes, 2001), the fundamental cause theory (Link and Phelan, 1995), and the cumulative advantage/disadvantage theory (Dannefer, 2003) —were helpful in the conceptualization of this dissertation. On a macro-level, this dissertation is guided by the political economy of aging theory and the cumulative advantage/disadvantage theory in understanding the powerful role of the state and social forces, and how they shape individual's aging experiences over time. The fundamental cause theory, applied at a meso-level, further examines social determinants of health, it also helps establish a linkage between social institutions and individual's lives. The following section will explain how this dissertation is guided by the above three theoretical frameworks.

3.1 The Political Economy of Aging Theory—the Macro-level

The political economy of aging theory (PEAT) argues that aging is a social process that can hardly be fully understood in isolation, one must also take into consideration the larger social context that has broad implications for the experience of old age and aging (Estes, 2001 p. 1). Structural forces in terms of social context and state policies are influential in any type of social systems and economies. For example, in the United States, a capitalist society where privately-owned capital enterprises are the basis of the economy and the role of the state is to ensure economic growth in the private ownership and free market system. Capital movements can impose serious threats that destabilize national economy in the age of globalization. Under the pressure of reducing the state expenditure for social security and Medicare in the U.S., the state has shifted from a “resource allocation state” to a “capital investment state”, by creating incentives for retirement saving instead of offering cash benefits (Quadagno, 1999).

Consequently, responsibility is transferred from the government to families and individuals and thus alleviated the state expenditure crisis. Meanwhile, the traditional meaning of aging and retirement for American population is forever changed. Without taking into consideration of the country's structural forces, it is not possible to thoroughly understand aging and retirement experiences in the U.S. The influential role of PEAT as the theoretical framework to explain the social process of aging is also studied in other capitalist societies, such as the U.K. (Walker, 1981), Canada (Myles, 1996), and France (Kohli et al., 1991; Walker et al., 1993).

In China, structural forces such as government policies are among the most fundamental and powerful factors that influence Chinese citizen's aging experiences. In the case of China's rural-to-urban migration, government policies have played a significant role in its emergence and the development of welfare policies. Since China's economic reform in the late 1970s, the tightly controlled and connected rural collectivity has been deconstructed by the implementation of the household responsibility system in rural China. A great number of farmers who used to be strictly bounded in the collectivity system before the implementation of the household responsibility system are thus free for more job opportunities (Lin, 1988; Chan, 2001).

Meanwhile, urban reforms since 1980s have given permission to urban enterprises to hire employees on contracts with fixed terms (Li, 1997). Although most of such contracts are short-term without social benefits, these policy changes have provided rich employment opportunities for rural migrants to work in cities. However, as more people migrate to urban areas, there are increasing number of elderly parents being left behind in rural villages. The impact of the traditional filial piety and family structure on population aging may not be the same as before the rural-to-urban migration at such a large scale. Structural forces have created the environment for China's urbanization to emerge/develop and reshaped the meanings of getting old for migrant

workers and their families. The traditional Chinese culture is being challenged and redefined. The insight of political economy of aging provides guidance for this dissertation with a contextual understanding of Chinese migrant worker's aging experiences in the Chinese social and cultural context at the macro-level.

3.2 The Cumulative Advantage/Disadvantage Theory—the Macro-level

The cumulative advantage/disadvantage theory (CAD theory) is useful in the conceptualization of this dissertation. Dannefer (2003 p.327) defines the CAD theory as “the systemic tendency for interindividual divergence in a given characteristic (e.g., money, health, or status) with the passage of time”. The CAD theory particularly emphasizes the role of the macro-level factors in shaping life trajectories. In China's social context, the major structural level factor that affects migrant workers' future well-being into aging and retirement is the *hukou* system. While residents in urban China enjoy a comprehensive set of social benefits, such as education, healthcare, and pension, rural residents receive limited public funding in education, healthcare, and pension (Liu, 2005; Shen & Williamson, 2010). The gap in educational attainment and resources at a young age resulted in most rural-to-urban migrant workers' position at the bottom of the labor force pyramid and working in physically and mentally demanding, dangerous, and dirty jobs with low pay in later years (Qian & Smyth, 2008). These jobs placed heavier tolls and exposed them to a greater risk of work-related injuries as their length of work increases. Also, having to move from where their *hukou* is registered to urban areas poses additional challenges to Chinese migrant workers, because there are few preexisting social networks that can help them tackle uncertainties and life stressors that they face.

The CAD theory emphasizes both cumulative advantageous and disadvantageous components in its definition. The cumulative advantage component of it argues that individuals'

advantageous resources accumulate over time, and that accumulation comes with more opportunities and resources that lead to better well-being; the cumulative disadvantage component, on the other side, argues that individuals' disadvantages accumulate over time, and that accumulation brings more risks and obstacles in lives, thus threatens one's well-being. In the Chinese migrant workers' case, advantageous resources could be having more wealth and social support, better employment experience and health, etc.; examples of disadvantage could be suffering in poverty, lack of social support, having poor health, or having unfortunate life experiences. Cumulation of such advantageous/disadvantageous resources over time predicts their future well-being in aging and retirement.

3.3 The Fundamental Cause Theory—the Meso-level

Link and Phelan's (1995) fundamental cause theory (FCT) from the meso level is particularly insightful in understanding that health is socially determined and making the linkage between social institutions and individual's lives. FCT states that there is an ongoing association between social factors and individual's health, because social factors including race, social class, and SES "are so closely tied to resources such as money, knowledge, prestige, power, and beneficial social connections that protect health no matter what mechanisms are relevant at any given time" (Link and Phelan, 1995 p. 87), and such association cannot be explained away by individual's risk factors for any given health issues.

In the social context of China's urbanization, the fundamental cause that has led to migrant worker's current hardship is China's *hukou* system. Such urban/rural stratification system have resulted in rural residents' lack of educational resources at a younger age, and thus limiting their chances of getting better employment opportunities with better pay and benefits in adulthood (Qian & Smyth, 2008). As shown in the previous literature, employment opportunities

available for migrant workers in the job market are usually those that are physically and mentally demanding, dangerous, and dirty, such as construction workers, hotel cleaners, and waiter/waitress (Wong & Lee, 2003; Lee & Meng, 2010). With these jobs, migrant workers have to work excessively long hours per week, but only receive approximately 70% of the local average pay (Gao et al., 2012). Further, these difficult jobs are often established without work contracts or with extremely limited medical, work-related injury benefits (Li, 2008; Song & Appleton, 2008; Gao & Riskin, 2009). Therefore, it is not surprising that, when in urgent need of medical help, they have limited access to urban public health services because of their rural hukou, all costs must be paid out of pocket, which is generally not affordable for a population that is underpaid. These disadvantages accumulating over life eventually drag the migrant workers to the category of lower social class that suffer from poverty (Liu et al., 2017; Park & Wang, 2001), discrimination (Lee, 2012; Liu et al., 2014; Wang et al., 2015), and poor health (Tan, 2000; Wong & Lee, 2003).

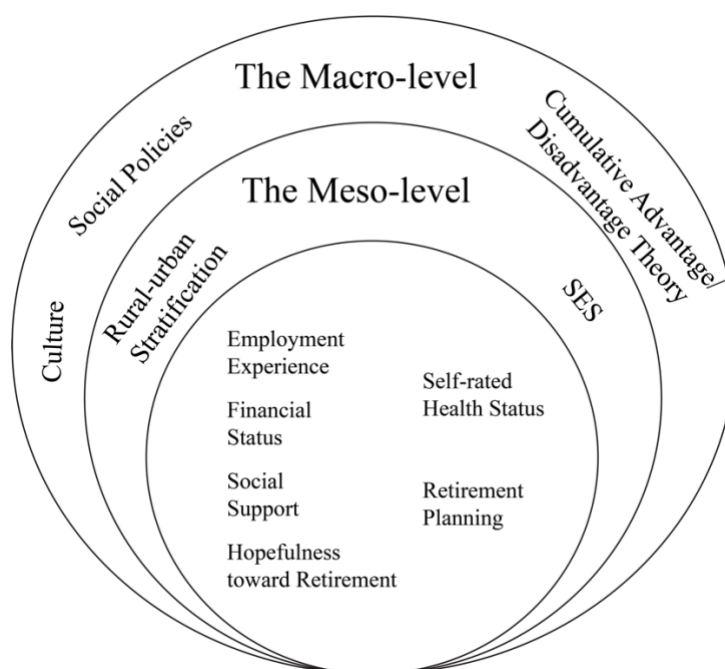


Figure 1. The Multilevel Theoretical Framework

These three theories have provided sociological guidance in the process of conceptualizing the 3-article dissertation. However, due to the page-limitation required for each article in the process of submitting it to different research journals, I was unable to apply the theories in full discussion into the individual papers. Reading between the lines, sociological theories and insights penetrate all of my arguments at meso-level and macro-level for the understanding of migrant workers' migration experience and their retirement future. Below are my three articles.

4 PAPER 1: MIGRATION AND HEALTH—FREEDOM OF MOVEMENT AND SOCIAL BENEFITS FOR CHINESE MIGRANT WORKERS

Abstract

This study examines factors of migration experience affecting migrant worker's health and healthcare. Mixed methods were utilized. A survey of 817 migrant workers from three Chinese emigration provinces was conducted in 2018 and a follow-up study of 30 intensive semi-structured interviews was completed in 2020. Using binary logistic regression, it was found that migrant workers' longer work experience is correlated with poorer self-rated health. Better financial status is positively correlated to good self-rated health. Qualitative findings shed light on the cumulative effect of the length of work experience and fear of medical cost on migrant workers' declining health. The lack of portability in health insurance and different reimbursement rates in health care access are structural barriers in health-seeking behaviors among Chinese migrant workers. Policy implications are presented in the global context of social rights and freedom of movement.

4.1 Introduction

In 2003, China started the “new rural cooperative medical insurance system” (NRCMIS) (State Council, 2002). It was an attempt to make health care accessible to rural residents, roughly 600 million people or about half of China’s population. For the next 6 years, the enrollment rate for the NRCMIS had reached 96% in China. This high participation rate is indeed a major achievement of China’s national healthcare. Yet, this health insurance does not ensure the freedom of movement for China’s rural residents working in urban areas. When a rural migrant worker becomes sick in an urban setting, he/she has to return to the home village for diagnosis and treatment to be reimbursed. In 2019, there were roughly 300 million migrant workers in China, accounting for 30% of China’s total workforce (National Bureau of Statistics, 2019a). Their healthcare is crucial to their well-being. To what extent China’s national healthcare system is available to all citizens? How portable are these healthcare coverages? This paper adds to the existing literature by using a mixed methods approach (both qualitative and quantitative data) to understand Chinese migrant workers’ migration experience, health and healthcare. In the process, this paper shed light on the social rights and social stratification systems in the access and management of healthcare in China.

4.2 Literature Background

In the following section, I’ll introduce the social background of this study and provide a brief review of the previous literature regarding migration factors and health.

4.2.1 *Social Right and Social Harmony*

The concept of social rights has been widely discussed and implemented in social policies among social democratic Nordic countries and in the European Union (EU). Initiated by T.H. Marshall (1950), social right is fundamentally the sharing of social benefits among citizens

in the same nation in education, pension, health care, and a decent standard of living in a given society (Cohen, 2010). In Scandinavian countries, “the principle of universal social rights is extended to the whole population” as a part of nation-building after WWII (Kuhnle, 2019 p.7). With the fall of the Berlin Wall, the freedom of movement of goods, services, capital, and people, demanded access to cross-border healthcare. In 2008, the European Union proposed the “Directive on the application of patients’ rights in cross-border healthcare.” (Vollaard & Martinsen, 2017 p. 343); The Court of Justice of European Union (CJEU) case-law has been “instrumental to advance some type of commonality in patients’ rights”. Consequently, “when the citizens of a Member State travel outside their national frontiers, they are now entitled to receive health care should they need it, and have it reimbursed by their home (national) authority” (Mossialos et al., 2010 p. 5). To be clear, each European nation-state has its own laws and regulations and its own healthcare system. Yet the EU law and the CJEU have “created a new domain for cross-border healthcare on a European scale (Martinsen 2017 p.342). Regardless of their differences, “healthcare is the responsibility of the member states,” the EHIC ensured interactions of people (staff and patients), goods, services, and freedom of movement across borders” (Mossialos et al., 2010 p. 4-5).

China started the “New Rural Cooperative Medical Insurance System” in 2003 (State Council, 2002), constructing a “harmonious society” was the slogan under the former President Hu, Jintao. Currently, President Xi, Jinping puts great emphasis on “Social Harmony.” The connotations of “harmony” in these two social contexts have changed. Ge and Huang (2017) differentiated the concept of “harmonious society” from “harmony” as a core social value in these two different eras. While “Constructing a harmonious society” focused mostly on a peaceful and lawful society; “harmony” as a core social value emphasizes social integration and

a greater sharing of national wealth. Qiu (2020) points out that the Chinese central government started restrictions on freedom of travel/movement from rural to urban areas in May of 1962. Not until the economic reforms of the 1980s did the farmers have the freedom to travel and work in urban areas. In 2017, the central government put “developing rural China” as a task in its Community Party agenda. Qiu (2020 p. 20) argues, to develop or vitalize rural China, the key is to break the rural and urban binary divide to allow an equal sharing of public services and social benefits. Though not using the word “social rights,” clearly, there have been open discussions of the greater sharing of social benefits among all citizens of China, rural or urban. Of all social benefits, healthcare is at the core.

4.2.2 An Overview of the Healthcare System in Rural China

The initial stage of China’s rural healthcare system was operated under its collectivization system in the 1950s (Kelley Lee et al., 1994 pp.10; Wang et al., 2016), also known as the rural cooperative medical system (RCMS). Under RCMS, farmers with medical backgrounds (trained by other experienced doctors) were trained with basic medical skills and served as the primary healthcare providers, known as the “barefoot doctors” in rural areas. They were mostly part-time doctors who also bore farming responsibilities. The collective welfare funds of local communes constituted a major source of funding for the RCMS ranging from 30% to 90% of its total funding depending on locality (Cheng and Liu, 1995 pp. 2), meanwhile, farmers also contributed roughly 0.5% to 2% of their annual income to the funding (Carrin et al., 1999). This system had provided Chinese farmers basic access to primary healthcare before the 1980’s economic reform. However, as China transformed from a collective economy to a market economy in the 1980s, a major breakdown of the initial RCMS occurred. The collapse of the communes resulted in severe disruptions of the public funding sources, and thus significantly

reduced farmers' participation in the RCMS. By 1984, Chinese villages covered by the RCMS had dropped from 90% to 4.8% (Carrin et al., 1999). The vast majority of rural residents had lost basic medical care security and the self-financed medical system had become dominant in rural China (Ling, 2002).

The new rural cooperative medical insurance system (NRCMIS) was introduced in 2003, emphasizing the joint financial efforts of the central and local governments, villages, and rural residents to meet basic healthcare needs. Participation in the NRCMIS was not mandated. For those who participated in the program, they received no less than 10 RMB a year from the local government to compensate their healthcare expenses, but it required their contribution of no less than 10 RMB a year as well (State Council, 2002). The central government subsidized an additional 10 RMB a year for participants in the less developed regions on top of the local government's subsidies and personal contributions. This was an important structural level effort in protecting rural residents from the poverty caused by massive healthcare expenses. However, major downsides also exist. The first one lies in its primary aim of only protecting participants from hospitalized treatments. Outpatient treatments, medicine, and minor illness are barely covered (Wang, Gao, Li, & Li, 2003). This narrows down the actual benefits that participants receive. Secondly, The NRCMS requires that rural residents' medical expenses only be reimbursed in where their hukou (residential registration) is located (Zhou & Lu, 2016). Therefore, migrant workers in various urban locations would have to return to their hometown to have such costs reimbursed, but most of them can't afford to do so because of the threat of losing income, which constitutes another major barrier for migrant workers to be fully protected by the NRCMIS. In 2016, The NRCMIS was combined with the urban employee medical insurance system and urban resident medical insurance system and were collectively named as the urban

and rural residents' medical insurance system (State Council, 2016). This recent change has allowed rural migrant workers to seek medical treatment in urban locations within the same province. It is however not portable outside the province. The reimbursement rate is also much lower once outside one's own registered county.

4.2.3 The Social Insurance System in China

Work-related injury insurance, old age pension, health insurance, childbirth insurance, and unemployment insurance constitute the main body of China's social insurance system (Cheng, Nielsen, & Smyth, 2014). They are often employment-based and offered as a whole package to female and male workers as part of the employment benefits through employment contract. Workers who are covered by the system enjoy financial compensations/reimbursement for work-related injuries, old age security, illness, childbirth, and unemployment. Workers are generally required to make monthly contributions to their accounts with their employers. The contributing amount varies by individual's participating locations. For example, in Anhui province (Da Jia Bao, 2019), employees are required to contribute 2% and employers 8% of their payroll to social pooling for medical insurance. For unemployment insurance, both employees and employers are required to contribute 1.5% of payroll to social pooling. Work-related injury and childbirth insurance do not require employees' contributions; all costs are assumed by employers which are roughly 1% of employees' payroll income for each. Individuals are qualified for insurance benefits after 1 year of participation for the unemployment and childbirth insurance but are qualified for the medical insurance and work-related injury insurance benefits immediately upon participation.

Social insurance programs are offered through formal employment contracts. Migrant workers often are either not offered such contracts or some would even prefer working without

such contracts (Cheng et al., 2014). In urban work settings, employment contracts generally state that employers provide social insurance to their employees, in state-owned enterprises in particular. However, migrant workers, even currently, are mostly employed in small businesses or private companies and work in jobs with a high turnover rate (Song & Qi, 2014). As a result, they are mostly not entitled to such contract-based benefits. Up till 2006, roughly 79% of migrant workers did not have a formal employment contract with their employers (State Council, 2010).

The Labor Contract Law was enacted in 2008 to protect all worker's lawful rights and benefits by mandating the provision of social insurance by employers in all employment relationships, regardless of employee's origin of hukou registration. In case when an employment contract is absent, an open-term labor contract applies, which still mandates the provision of social insurance to employees, if any of the following conditions are met: (1) an employee has completed two consecutive fixed-term labor contracts, (2) an employment relationship is maintained for over 1 year without a formal written employment contract (Gao, Yang, & Li, 2012). By the end of 2017, the percentage of migrant workers who had formal labor contracts with employers reached 35.1% (Li, 2017; Xu, 2017). In the same year, the social insurance participation rate for migrant workers had also increased considerably. By now, 98% of China's population claims to have health insurance (Ministry of Human Resource and Social Security of the PRC, 2017; Wang 2019: p. 41). Even though great improvement has been made to protect migrant workers' lawful rights, the vast majority of migrant workers are still working in temporary jobs without any health coverage in urban area.

4.2.4 Demographic Factors and Self-rated Health

Self-rated health is a global, simple, and easy to administer measure of an individual's overall health (Idler & Benyamini, 1999). Often, this construct is measured by a single question, asking research subjects to rate their overall health as either good, fair, or poor. Self-rated health has been shown to associate with mortality indicators in a large body of the previous health literature (Idler & Benyamini, 1997; Franks, Gold, and Fiscella, 2003). Older age, being male, having lower educational attainment, and working in more dangerous occupations are associated with poor SRH (Haseli-Mashhadi et al., 2009; Jia et al., 2014; Ma et al., 2020). Self-rated health has been found to decline as people age (Haseli-Mashhadi et al., 2009). Male workers are more likely to report poorer health because they engage in occupations with higher risks, such as construction work, and have unhealthy lifestyles, such as smoking and drinking (Yang et al., 2015). Lower educational attainment is also found to associate with a lower level of health knowledge (Haseli-Mashhadi et al., 2009), and a greater likelihood of working in physically straining and dangerous jobs (Wong, Li, & Song, 2007). Studying these demographic factors provide a basic understanding of health disparities in the Chinese migrant population.

4.2.5 Employment Experience and Self-rated Health

Employment life accounts for a large part of Chinese migrant workers' everyday lives while living and working in urban China. Therefore, work experiences constitute a main source of social determinants of health among them. Longer years of working in the physically demanding work environment (Li & Chen, 2010; Yang, 2020) and work-related injury experiences (Wong, Li, & Song, 2007; Fitzgerald et al., 2013) lead to poorer health, because such experiences could impact health by directly causing physical and mental harm, and indirectly, through migrant worker's limited access to local public health services and health

insurance when in need of medical help (Wong, Li, & Song, 2007; Zhang, 2012; Zhu et al., 2014). Delayed wages also contribute to poor health for migrant workers (Tan, 2000; Wong et al., 2007). Intentionally delaying migrant worker's wages is known as a strategy that employers use to prevent workers from leaving freely. Some employers even require that new employees deposit cash as the prerequisite for hiring (Ma, 2000). Without timely wages, maintaining life and good health is difficult for migrant workers.

Conversely, positive employment experiences, such as having pleasant relationships with colleagues and employers promotes good health in employment settings. In a previous study focusing on Chinese migrant worker's work and lives, Wong and Lee (2003) found that having pleasant relationships at work is essential for migrant worker's health. Understandably, pleasant relationships at work help migrant workers foster a sense of belonging and provide migrant workers some social support when needed. A positive work environment may help them battle life obstacles and integrate into cities.

4.2.6 Income and Self-rated Health

Higher income promotes health in the Chinese migrant population (Liu et al., 2019; Yang, 2020). Before migrating into urban areas, migrant workers' living expenses are minimal because houses are self-owned, and food was mostly produced by their lands. However, living expenses dramatically increase after they have emigrated to cities, because rent, daily groceries, as well as transportation are costly in cities. Therefore, those with higher incomes are more likely to better afford living expenses while working in cities and have better nutrition, housing, health-related investment (such as health insurance and fitness), and health management. Previous research indicated that people with lower incomes are also significantly less likely to utilize healthcare services compared to their richer counterparts (Wong et al., 2007; Liu & Griffiths,

2011; Zhang et al., 2018). Under the hukou system, migrant workers are not eligible for urban healthcare benefits. Purchasing commercial health insurance is not affordable and feasible. Thus, not surprisingly, only very few migrant workers with high income can afford to use medical services since all costs must be paid out of pocket.

In the current social context of urbanization and population aging, rural residents migrating from rural to urban areas were seeking for better employment opportunities with an aim to improve current and future lives. However, having less human capital and institutional support facilitates employment in challenging environments with lower pay, which may lead rural migrants to face experiences that are not as beneficial as previously assumed. On the opposite side, the longer the migrant workers have worked and being exposed to injury risks, the more likely that they may experience declined health. Based on the theoretical as well as the previous empirical evidence, this dissertation proposes the following hypotheses:

Hypothesis 1: Indicators of Chinese migrant worker's negative employment experiences are associated with worse self-rated health, such as longer years of work experience, having adverse experiences at work, poor relationships with employer and colleagues.

Hypothesis 2: Lower level of income is positively associated with poor self-rated health among Chinese migrant workers.

4.3 Methodology

This study utilizes both quantitative and qualitative data. I will first present a quantitative sample and methods. Then follow up with an explanation of qualitative methods.

4.3.1 Quantitative Dataset and Sample

The quantitative data for this paper comes from the Survey of Chinese Migrant Worker's Sustainable Livelihood. This is a cross-sectional dataset designed to provide information on the

Chinese migrant workers' health status, financial well-being, retirement planning, and attitudes toward the future. Data collection was conducted in 2018 in three Chinese emigration provinces, Anhui, Henan, and Sichuan by a group of trained researchers at a university in central China. The following key criteria were used while determining the eligibility of study participants: age range was set at 45 and above; the residence was set by legal rural residents in the above provinces, and; participants must have at least one-year migration work experience. Random sampling was not feasible since over 50% of the working age population in these provinces were working as migrants outside their home village. Therefore, data collection was conducted at respondents' home locations during holidays or around the Chinese New Year when migrant workers were most likely to have returned home. Informed consent from all respondents was obtained before the data collection. A total of 1,200 migrant workers were initially identified, 117 did not complete the survey, which makes the sample size come down to 1,083 in the quantitative data collection. After list wise deletion excluding those who did not provide valid answers for the study variables, the final sample size was 817.

4.3.2 Measurement

Self-rated health is the dependent variable of this study. Respondents were asked to rate their health as either good or poor. Good self-rated health was coded as "1" and poor was coded as "0". The length of work experience was measured by migrant workers' self-reported years of work experience as migrant workers. It was coded into 5 years or below and 6 to 9 years, with 10 years and above as the reference category. Adverse experience at work was measured by the question of whether they have experienced any adverse experience (wage delay or a work-related injury) at work. Yes was coded as "1" and no was coded as "0". Relationships with colleagues and employers were measured by two separate questions asking migrant workers' self-perceived

relationships with colleagues and employers. A good relationship was coded as “1” and the poor were coded as “0”. Income was measured in 3 categories. Respondents were asked “what is your monthly income at present? If currently not working, what was your monthly income for your most recent job?” Respondents could choose from 1=3000 RMB or below (\$425 or below), 2=3001-5000 RMB (\$425 to \$714), and 3=5000 RMB and above (\$714 or above). Based on China’s urban average pay standard, below 3000 RMB was coded as low income, 3001-5000 RMB was coded as medium income, with high income (5000 RMB) as the reference category.

Respondents’ demographic characteristics, including age, gender, educational attainment, and work type, were used to reduce the chances of spurious statistical inferences in this paper. Age was measured in years. Gender was coded as male (=1), with the female (=0) as the reference category. Educational attainment was categorized as elementary school, middle school, and high school and above. Work type was coded as workers, such as construction or factory workers (=1), with other work types, such as service jobs (=0) as the reference category.

4.3.3 Statistical Analysis

Two nested binary logistic regression equations were estimated using SPSS version 25 to test the effect of migration experience on Chinese migrant workers’ self-rated health. Model 1 contained respondents’ demographic variables, length of work experience, adverse experience, relationship with colleagues and employers. Model 2 further added in respondents’ income.

4.3.4 Qualitative Data Collection and Methods of Data Analysis

To gain an additional in-depth understanding of migrant workers’ health and healthcare, Researchers did a follow-up study in 2020 after the survey with 30 migrant workers using snowball sampling method. Applying the concept of theoretical saturation in the interviewing sampling, the researchers focused on three major factors shown important in quantitative

analysis: work length and work-related health issues, healthcare-seeking experience in urban areas, and income in relation to health. When asking interviewees' work-related health issues, their types of work and length of work in relation to their health were focused. After reaching a theoretical saturation, i.e. no additional new information can be drawn from the interviewees, an additional factor was added, such as health-seeking experience in urban areas. To understand how migrant workers handled their health problems and work-related injuries, qualitative data collectors sought to find migrant workers who had experienced work-related injuries and health problems. These methods are helpful in providing a deeper and targeted understanding of the relationship between migrant workers' work and health management experiences in urban locations.

All interviews were audio-recorded, and field notes were taken on the same day. Most interviews lasted from 30 to 60 minutes, with the longest session about 2 hours. Before the interview, each participant was informed about the research, data collection method, and the procedure of protecting individual information in the use of data. The confidentiality of interviews was strictly maintained. To protect participants' privacy and confidentiality, all interviews took place in a public space mutually agreed upon between the interviewee and interviewer. Pseudonyms were used to protect interviewees' confidentiality.

All recorded tapes were transcribed into Chinese, and the transcriptions along with field notes were logged into Words for analyses. Data analyses followed modified grounded theory approach (Strauss & Corbin, 1998). Once the data pool was set, the analytical process began with line-by-line open coding, breaking the data into small categories. For example, categories that emerged from open coding include, fear of cost, fear of illness, have no illness, have only small aches and pains, and etc. After the initial coding procedure, axial coding was applied to find the

interconnection between categories; and understand how categories were contextualized, and perhaps intertwined with one another (Strauss & Corbin, 1998). With axial coding, the relationships between categories were identified. For example, the reason for not seeking health care in urban areas was linked to their fear of high cost, the lack of portability in health care, and the fear of loss of income or job. During this process, a relation diagram was created to visualize and denote the interactions between categories. Finally, related categories were combined to form a larger theoretical scheme, where core categories were generated (Strauss & Corbin, 1998). The notion of cumulative disadvantage emerged, which served as the core category in this research.

4.4 Results

I will present quantitative findings first and start with descriptive statistics of the sample in the survey.

4.4.1 Quantitative Results

As shown in Table 1, the majority of the survey respondents were male (74.3%), workers (61.7%), with middle school certificate (50.4%). Their average age was 52.8 with a standard deviation of 5.9. Among all, 51.3% reported good self-rated health, 24.7% have reported having adverse experience at work. Over half of the respondents have at least 10 years' work experience as migrant workers, followed by 23.4% reporting having 5 years or below and 16.8% having 6 to 9 years' work experience. The majority of respondents (60.8%) reported having good relationship with colleagues, but only 43.9% reported having good relationship with employer. Most of the respondents were low (42.6%) and medium level (38.3%) income earners, only 19.1% reported high income.

Table 1. Descriptive Statistics

	%(N)	M(SD)
Self-rated health		
<i>Good</i>	51.3% (419)	
<i>Poor</i>	48.7% (398)	
Length of work experience		
<i>5 years or below</i>	23.4% (191)	
<i>6 to 9 years</i>	16.8% (137)	
<i>10 years and above</i>	59.9% (489)	
Adverse experience		
<i>Yes</i>	24.7% (202)	
<i>No</i>	75.3% (615)	
Self-perceived relationship with colleagues		
<i>Good</i>	60.8% (497)	
<i>Poor</i>	39.2% (320)	
Self-perceived relationship with employer		
<i>Good</i>	43.9% (359)	
<i>Poor</i>	56.1% (458)	
Monthly income		
<i>Low</i>	42.6% (348)	
<i>Medium</i>	38.3% (313)	
<i>High</i>	19.1% (156)	
Age ¹		52.8 (5.9)
Gender		
<i>Male</i>	74.3% (607)	
<i>Female</i>	25.7% (210)	
Education		
<i>Elementary school or below</i>	35.9% (293)	
<i>Middle school</i>	50.4% (412)	
<i>High school or above</i>	14.6% (112)	
Work type		
<i>Workers</i>	61.7% (504)	
<i>Other work type</i>	38.3% (313)	

Notes: N=817. ¹Range=45-77

Bivariate correlations were performed among all variables used to check for possible multi-collinearity issue (Table available upon request). Significant correlations were found between the independent variable self-rated health and all variables used in the analysis, except respondent's gender, work type, and relationship with colleagues. Either non-significant correlation or weak to medium correlations were observed among all the independent and control

variables, indicating that multi-collinearity is not an issue for this study. In the next step, I conducted regression analysis for self-rated health.

Table 2. Binary Logistic Regression Models Predicting Self-Rated Health (N=817)

	Model 1	Model 2
Age	.968(.013)*	.972(.013)*
Male (ref.= female)	1.321(.182)	1.213(.185)
Education (ref.= high school and above)		
Elementary	.560(.235)*	.627(.239)
Middle school	.844(.224)	.937(.227)
Workers (ref.= other work type)	1.162(.163)	1.229(.167)
Length of work experience (ref.= 10 years and above)		
5 years or below	1.447(.181)*	1.650(.187)**
6-9 years	.990(.201)	1.039(.203)
Adverse experience (ref.= no)	.572(.171)**	.584(.174)**
Good relationship with colleagues (ref.= poor)	1.021(.158)	1.023(.160)
Good relationship with employer (ref.= no)	1.777(.155)***	1.728(.157)**
Income (ref.= high)		
Low		.464(.214)***
Medium		.576(.213)*
Nagelkerke R Square	.082	.102
N	817	817

Notes: 1. *** p<.000; ** p<.01; * p<.05; 2. The numbers displayed are OR(SE)

Table 2 shows the odds ratio and the standard error for the effects of employment experience and monthly income on self-rated health net of the influence of respondent's demographic variables. As shown in model 1, the length of work experience is a significant predictor for self-rated health in the Chinese migrant worker population. Individuals who have less than 5 years' working experience are 44.7% more likely to report good self-rated health than those with more than 10 years' working experience, net of the influence of all other variables. This indicates the potential deteriorating effect of longer employment on migrant worker's health. Having adverse experiences such as work-related injuries or wage delay significantly threatens migrant worker's health. Individuals who have such experiences are 42.7% less likely to report good self-rated health than those who do not have such experience. Good relationship

with employer as a type of positive work experience significantly promotes migrant worker's health. Those reported having good relationship with employer are 77.7% more likely to report good self-rated health as compared to their counterparts who reported poor relationship with employers.

Model 2 indicates that higher level of monthly income promotes migrant worker's health. Individuals with low and medium level income are 53.6% and 42.4% less likely to report good self-rated health, respectively, as compared to those with high income after holding all employment experience and demographic variables constant. After adding monthly income to the model, the significant relationship between educational attainment and self-rated health has been explained away and most previously significant relationships have been attenuated to some degree, suggesting the powerful role of income in affecting human health. However, it is noteworthy that income also serves as a suppressor in the relationship between the length of work experience and self-rated health. Respondents who have no more than 5 years of working experience are now 65% more likely to report good self-rated health as compared to their counterparts who have more than 10 years' working experience after taking monthly income into account. How do work experience, length of work experience, employer-employee relationship, and income play out in lived experiences? Qualitative data have further enriched the understanding.

4.4.2 Qualitative Results

The qualitative results of this paper focused on the following three aspects.

Cumulative Disadvantage in Health

In-depth interviews with migrant workers allow an opportunity to see that the participation of NRCMIS is nearly 100% after excluding the few (3 out of 30) who have already

participated in the urban health insurance. Only those three who had urban healthcare had reported having health check-ups. When asking if they had any illness, most migrant workers would say, “I have only minor aches and pains, no major illness.” For fear of high medical cost, most migrant workers would either self-treat an illness by buying over-the-counter drugs, or simply avoid going to the hospital altogether.

Ms. Cao, age 52, is an on-site cook for a construction crew in Wuhu. It has been her 12th year working as a migrant worker. When asked if she had ever suffered any illness during her years working in the city, she replied:

“I suffer from lower back pain constantly, but I never went to see a doctor or visit a hospital. If the pain is not going to kill me, there is no point to see a doctor. I recall one time, the pain was very intense, so I went to the hospital. The doctor told me I had an infection; I had to take an IV to treat the infection. Since it was just an infection, I realized that I could just buy some antibiotics to treat the infection myself next time. I won’t need to see a doctor again for back pain” Case 6.

Many antibiotics are available as an over-the-counter drug in China. Patients buying antibiotics to self-treat an infection is commonplace. Similarly, Mr. Zhang, age 52, reported having severe back pain. He had been working in urban areas for 26 years. He also had NRCMIS, he had no local health insurance at the workplace. For years, he suffered from back pain, which he simply ignored, and accepted as a part of his life.

“For years, I dared not enter a hospital. When I went into a hospital, my heart would beat like a drum. I had no idea how much money it would cost me. I feared that the little money I earned would all be thrown away in the hospital...Last year, my back pain was so intense; I couldn’t bear it anymore. To receive treatment, I had to have a co-

worker accompany me home by a long-distance bus to visit the local rural clinic for primary care. With the doctor's referral from the rural clinic, I was then sent to the county level hospital. There, I was diagnosed to have lumbar tuberculosis. I was hospitalized for some time for treatment. Since it is not the type of illness that requires surgery, I have to pay more attention to self-care and health maintenance. So, I figure, I just as well start working again, because if I don't work, I will have no income..." case 16.

Similarly, the fear of medical costs and high hospitalization fees has delayed Ms. Kim's treatment. Back in 2018, she was working in Shanghai as a janitor, she was a migrant worker from rural Anhui province. She felt dizzy every day in early 2018, and her calves and legs were swollen. For several months, she went to small clinics seeking consultation. At first, nurses in a nearby clinic thought she had high blood pressure. After testing, it was denied. Then, she did a blood test, for diabetes, no diagnosis was confirmed. She dragged on until the end of the year when she returned to her home village. Her husband, seeing her turn so thin and look so miserable, insisted to take her to see a doctor in the county hospital. With proper attention and tests, she was diagnosed with hyperthyroidism. When asked why she didn't seek earlier medical treatment while working in Shanghai, she replied:

"I did go into a hospital for treatment in Shanghai, but I did not know what to do. The hospital is like a maze. I got all lost—I had no idea whom to ask. You had to make an appointment, register, then wait for a long time. I don't read well; I don't even know who or where for an inquiry. I dare not to seek any treatment! After I returned home, I received treatment in the county hospital, the hospitalization fees were reimbursed. I also

had a chronic disease medical card. With this, a portion of my medicine-cost can be reimbursed” case 20.

As shown, rural migrant workers, though work and reside in urban areas, generally had no medical insurance in cities, still, in 2020. When illness struck, they had to return to their rural villages to receive treatment. The lack of portability in medical insurance for migrant workers was a major obstacle in their pursuit of medical treatment. The fear of high medical cost further prevents migrant workers from seeking preventive care or proper medical attention. Not until a crisis happened, did a migrant worker seek a doctor. In such a case, they may have to travel a long distance by train or bus, to return to the rural area to obtain affordable medical care. This lack of portability and high cost of medical care in cities have contributed to their cumulative disadvantage in healthcare. Small aches and pains, when not treated due to fear of cost and lack of medical care portability, can turn into major illness as shown in the stories told by these migrant workers.

Work-related Health Problems

During the years working as migrant workers, having work-related accidents can dramatically change migrant workers’ health and well-being. Before 2008, accidental insurance was not required by the government; employers, especially small construction companies, would not purchase this insurance for workers. When accidents happened, workers were usually paid the minimum medical care, and compensation for loss of income was generally not paid. Most workers never even heard about this insurance. Mr. Zhu, age 50, working as a carpenter in a housing development company, provided the following details when he was asked whether he had work-related injury and insurance. He said:

“I did have a fall at work. This fall has given me constant back-pain which affects my work. My health is not that good nowadays. It is connected to that fall. I never heard about injury insurance. I also have had friends who were injured at work, they never had any accident insurance either. Some bosses are nice, they take you to the hospital for treatment; others don’t care. You have to pay for medical treatment out of your pocket. I have never heard about unemployment insurance either. You see, I have to work, even if I have constant pain. When the pain is intense, I take a break. But if I don’t work, I would have no income” Case 11.

Mr. Yao, age 56, working in an electric machinery factor. About 8 years ago, he was working in a factory outside of his home province. One day, while working, his electric tape dropped. He bent down to pick up the tape, his arm was accidentally caught into the electric machine. He was carried to the hospital, the company paid over 700,000 yuan for medical treatment.

“After coming out of the hospital, I was still recovering, could not work. So, I went to ask for some money to survive. The boss gave me 300 to 500 yuan each time, a total of 10 times or so. When I could start moving my arm, I stopped asking him for living expenses. I never heard about work-related accidental insurance” Case 18.

Mr. Wu is now 65 years old. His hometown is in Anhui province, but for years he worked in Shanghai. In 2012, he started to see red dots on his skin. He thought it was just skin rash or allergy. So, he went to a clinic for antibiotic treatment. After a week of receiving IV antibiotic treatment, there was no improvement; instead, a fever broke out.

“So, I had to go to a hospital there in Shanghai, where I worked, for a diagnosis. The doctor told me that I had lupus erythematosus. It is an auto-immune disease, it is

often caused by pesticide or high chemical contact. I was working in a factory making fabric for clothing. I handled chemical dye on daily basis. The dye smelled bad; the dyed fabric affected my health over the years. It has been 7 to 8 years since the diagnosis, I have developed a kidney complication due to this disease. I have to go to the hospital once every month for treatment. I have spent somewhere between 700,000 to 800,000 yuan (\$100K to 120K), roughly 200,000 to 300,000 yuan are out of my own pocket. Reimbursement is roughly half if inside the province. In Shanghai, I probably got a 20% to 30% reimbursement rate” Case 28.

As shown, adverse work experience, whether due to accident at work or work-related health problems are directly related to accumulated health problems. The longer migrant workers worked in cities, the more likely they were to face health challenges and sometimes, more severe health problems. The lack of portability of healthcare, the low reimbursement rate when treatment occurred outside one’s county or province directly related to migrant workers’ reluctance to seek treatment. Having a good relationship with the boss could mean that the worker, once injured, may receive some living expenses. Consequently, their health worsened as they age. In some cases, however, the migrant working experience can be a route out of poverty.

Better Financial Status Means Better Health

Several migrant workers shared their happy work experience and promising retirement future. Mr. Zhang, 45 years old, is a migrant worker from Anhui province, now working in Zhejiang Province (East coast, near Shanghai). He has worked there for over 27 years. He works in the field of communication technology. His monthly income is 8000yuan.

“I have bought all five insurances through the work-place: health, retirement, unemployment, injury and accident, and reproductive health and housing. My work-unit

offers very good benefits to employees. Every year, the work unit offers an annual health check-up. You know, health check-ups are very important. Many small illnesses, if you don't pay attention, may turn into major health problems. If we can discover small illness and treat it early, we can stay healthy. I have also put aside money for my retirement..."

Case 23.

The field of communicative technology has been a very profitable and rapidly growing industry in China. Good benefits in this particular company have given Mr. Zhang a promising future in both his good health and a good retirement.

Mr. Wang, age 49, is from Anhui province. He has worked in Jiangsu province for 27 years. By now, he is promoted to a managerial position in a furniture factory. His monthly salary is 150,000 yuan, about 3 times as much as an ordinary migrant worker. When asked about his health and health insurance, he replied cheerfully:

"My company bought us health and retirement insurances for us. The work unit also offers an annual health check-up for us. If I don't have good health, I would have nothing! I have also put aside some money to prepare for my old age. I have to rely on myself in old age. Once I have saved a good pension, I would have no fear in old age..."

Case 26.

Only 3 migrant workers among the 30 interviewed had urban healthcare, thus able to afford health check-ups. Ninety percent of migrant workers never had a preventive health check-up while working in urban areas. Among the interviewees, most expressed fear of medical cost as an explanation for not seeking medical treatment at the time of illness. Eventually, a small illness turns into a major health catastrophe.

4.5 Discussion

Below is a discussion of both the quantitative and qualitative results.

4.5.1 *Cumulative Disadvantage in Health*

Both quantitative and qualitative findings in this study showed that adverse work experience and length of work experience have a direct influence on migrant workers' health. Longer working years and dangerous work experiences, such as physically demanding work or working in hazardous environments, have caused many migrant workers to have debilitating health problems in a long run. Most migrant workers never had a health check-up, saw a doctor, or visited a hospital, which resonates with the previous literature that most migrant workers lack access to local public health services and health insurance when in need of medical help (Wong, Li, & Song, 2007; Zhang, 2012; Zhu et al., 2014). Most simply said, "We only have small aches and pains, no real illness." Their fear of the high cost of medical bills have eventually turned small illness into a major health crisis over time. On the other hand, having higher income also promotes better self-rated health. This is consistent with the previous literature that individuals with lower income are significantly less likely to use medical services, because higher income allowed migrant workers the ability to buy better health insurance and put aside money for future uncertainties (Wong et al., 2007; Liu & Griffiths, 2011; Zhang et al., 2018). It is particularly important to note that monthly income also serves as a suppressor in the relationship between the length of work experience and self-rated health. Longer work experience deteriorates migrant workers' health, but it also comes with opportunities for increased income because of their improved skills. However, when holding income level constant, the potential benefit of working longer years has disappeared, thus enhancing the negative effect of working longer years on migrant workers' health. Having a good relationship with the employer is also positively

correlated with better self-rated health as shown in both this paper's quantitative results and previous literature (Wong and Lee, 2003). Pleasant relationships with the employer translate employer's willingness to purchase better healthcare or pay for living expenses in case of injury or loss of wages for migrant workers. Consequently, this social capital promotes migrant workers' better health by having annual check-ups and/or a stronger sense of health security. For most of the migrant workers, two structural policy barriers are what they face: lack of portable healthcare benefit and continued social stratification of urban/rural divide in healthcare systems.

4.5.2 *Structural Barriers in Healthcare*

As shown in the qualitative data collected in 2020, when migrant workers experience a major health crisis, they still have to return to their hometown to receive treatment in hope of receiving any reimbursement of healthcare costs. This lack of portability in healthcare access negatively impact migrant workers' health. Furthermore, being rural residents, migrant workers very often do not have a work contract, therefore, some may have no insurance for work-related injuries, accidents, and loss of wages. Among the 30 interviewed participants, only 3 eventually were lucky enough to receive urban healthcare and other social benefits. This lack of healthcare portability and access to healthcare in urban areas for rural migrant workers are structural barriers prohibiting migrant workers from seeking health care and treatment.

4.6 Conclusion

China has made unprecedented progress in its alleviation of absolute poverty. By 2017, 800 million Chinese people were out of poverty (Pan, 2019. P.17). In the process of "building a harmonious socialist" China, as shown in the 17th National Congress of the Chinese Communist Party, the central government sets the goal that "all citizens have the rights to receive education, remuneration, employment, medical care, and housing." (Pan 2019 p. 17). The sharing of social

wealth and social benefit has brought to the center of the national conversation and government agenda. The healthcare insurance rate is reported to be nearly universal, up to 98% (Wang 2019: 41). Yet the implementation of these social welfare policies in general, healthcare in particular, appears to be still lagging based on this 2020 field study. As stated in the political economy of aging theory and cumulative advantage/disadvantage theory, such lagging is powerful and has introduced uncertainties and inequality into Chinese migrant workers' health and well-being over time, thus contributing to migrant workers' poor health. There are still major differences and inequalities in access to and reimbursement rates for health care in rural and urban China. It is particularly a major barrier for 300 million rural migrant workers who work in urban China.

This study is based on a convenient sample of 817 migration workers in 3 major emigrant provinces in China. It is a cross-sectional study. Interpretation of its findings should be done cautiously. Statistical findings may suggest a correlation between the greater length of migrant workers' work experience and poorer health. This correlation is not a causal relationship. The factor of aging itself may account for decreasing health. A longitudinal study may yield a better understanding of changing health at different points of aging and migrant workers' experience. Secondly, due to the data availability, work type of migrant workers was assessed as a binary variable, therefore, it limited the chance to see the differences between individuals with different types of job. Furthermore, respondents are from 3 major provinces with large numbers of emigrants. Different provinces may have different policies or policy implementation processes. What happened to migrant laborers in Anhui may not apply to migrant laborers in Hunan. Nevertheless, this study has the strength of combining the quantitative and qualitative findings to tell a full story of the lived experiences of migration, health, and healthcare. Its insight applies

not only to China but other countries that have large numbers of migrant laborers who have no portable health care.

5 PAPER 2: CAN RURAL MIGRANT WORKERS AFFORD TO RETIRE IN CHINA?

—UNDERSTAND THE CLASH OF CULTURE WITH SOCIAL INSURANCE

Abstract

This paper makes connections between social policies of retirement, Chinese migrant workers' migration experience, and their retirement savings. Using mixed methods, this paper presents a full picture of current rural migrant workers' retirement prospect in China.

Quantitative analysis utilized binary logistic regression with a sample of 699 Chinese migrant workers from three emigration provinces (Anhui, Henan, Sichuan) to explore four specific aspects of migrant workers' experience in relation to their retirement savings: financial status; length of work experience; social support, and hopefulness toward retirement. Findings revealed that migrant workers with better financial status, social support, and higher level of hopefulness toward retirement are more likely to have retirement savings compared to their counterparts.

Post-survey follow-up interview findings contextualized migrant workers' attitudes and behaviors toward retirement in contemporary China. Low income, lack of faith in retirement insurance, and investment in children's education, marriage, and housing are major deterrence for retirement savings. Both quantitative and qualitative findings suggested an ongoing clash of Chinese cultural tradition and emerging social policies of retirement insurance. Social policies mandating retirement saving program participation, providing tax benefits, and adjusting monthly participation rate for both migrant workers and their employers are helpful in improving migrant workers' well-being in old age.

5.1 Introduction

As of 2019, there are approximately 300 million migrant workers in China's labor force, accounting for approximately 20 percent of China's entire population and 35 percent of its labor force (National Bureau of Statistics of China, 2019a). Chinese migrant workers are known as the 'floating population', reflective of their transient and unstable social status in urban areas. This transient social status is the result of the China's urban-rural social stratification system, known as the household registration system (*hukou*), which grants individuals different rights to employment benefits, medical insurance, housing allowance, social welfare, and education within a registered area, based on the city, town, and village of birth (Liu, 2005). The associated social benefits are strictly restricted within individual's registered cities or provinces and are not portable as individuals migrate to other cities or provinces. As a result, migrant workers from rural China, even though working and residing in cities, do not enjoy the same benefit as their urban counterparts because their birth places are in rural areas.

For two thousand years since Confucius, Chinese farmers have tilled their land for crops to raise their families; they have always believed in raising sons for old age (Yang-er-fang-lao). Retirement has never existed for farmers in rural China until the last decade or two. As large numbers of farmers have spent 2-4 decades working in urban areas, the first cohorts of these migrant workers are approaching retirement age, an urban concept. Companies in urban China rarely hire migrant workers in manual labor after age 50. As of 2019, 24.6 percent of the migrant worker population are 50 or older and 24.8 percent are between 41 and 50 (National Bureau of Statistics of China, 2019b). Since most migrant workers work in short-term manual jobs for private firms without work contracts and their retirement age is not clearly articulated by state laws and regulations, it is common that many migrant workers stop working and return to rural

homes at about age 50 due to their declining health with little prospect for a pension in retirement (Xu et al., 2011). Facing these challenges, are Chinese migrant workers financially ready for retirement? How has migration experience affected their retirement savings? Using a sample from three Chinese emigration provinces: Anhui, Sichuan, and Henan, this study aims to explore four specific aspects of migrant worker's migration experience in relation to their retirement savings: (1) migrant worker's financial status, (2) length of work experience as migrant workers, (3) social support, and (4) their hopefulness toward retirement.

5.2 Literature Review

Below is an introduction of China's pension and social insurance system, and a review of the previous literature related to migration factors and retirement savings.

5.2.1 *Rural Pension Reforms and Retirement Savings in Rural China*

For centuries, rural elders had to rely on farmlands and adult children for old age support. Even after the establishment of PRC, pension benefits were largely unavailable in rural China (Shen and Williamson, 2010). In 1992, the first rural social endowment insurance program was piloted in several selected Chinese counties and was aimed to gradually roll out nationwide if successful (Mi & Liu, 2018). However, insurance funds were raised mostly by farmer's individual contributions without any government's subsidies, which resulted in extremely low replacement rate. Some farmers received only ¥3 /\$0.4 per month after retirement. Consequently, farmers' trust in the social endowment insurance program declined (Geng, 2009). This lack of trust negatively affected their participation in the New Rural Endowment Insurance (Wang, 2020). In 2009, the central government first started a non-contributory social assistance, called "Basic Old-age Pension" for all those 60+ living in rural areas. This amounts to ¥76 /\$11 per month in the beginning, adjusted to ¥88 currently (Ministry of Human Resource and Social

Security of China, 2018). Other pension benefits, similar to Social Security in the U.S., are only available for individuals who have voluntarily contributed to a retirement saving's account for 15 or more years. At age 60, they are qualified for the pension benefits based on their contribution (total amount of pension account balance divided by 139) (Weifenghr, 2020). This public pension scheme provides a fundamental source to be financially independent in old age in China. By far, it covers approximately 532 million participants in China (National Bureau of Statistics of China, 2019b).

Retirement savings is critical for individual's financial well-being after retirement. Numerous previous studies have collectively suggested that individuals who actively save for retirement are more likely to have higher levels of retirement confidence, preparedness, and thus better overall well-being after retirement (Joo and Pauwels, 2002; Taylor and Geldhauser, 2007; Wang and Shultz, 2010). In rural China where retirement never existed, not all individuals are willing to save for retirement. The Life-cycle Model of Consumption and Saving proposed by Ando and Modigliani (1963) is particularly insightful in explaining individual's motivation in making retirement savings. This perspective revealed that individuals first develop an understanding that financial accumulation during their work years is essential and necessary in ensuring future retirement life, thus, they start to make plans to save for retirement based on their earnings and spending. Lusardi and Mitchell (2011) categorized individuals into three categories reflecting their levels of financial preparedness for retirement: (1) individuals who make estimations about the amount of money needed for retirement are defined as simple planners, (2) those who have developed a saving plan for retirement are considered as serious planners, (3) individuals who have developed and followed their saving plans are considered as successful planners.

Not all individuals are successful planners for retirement. For example, in the United States, the employees who are at risk of not having adequate savings to maintain pre-retirement lifestyles after retirement have increased from 31 percent to 53 percent from 1980s to 2010s (United States Securities and Exchange Commission, 2016). Similar crises also exist in the United Kingdom and New Zealand (Benartzi and Thaler, 2013). A primary reason for the existing crisis was caused by the shift from the defined benefit to the defined contribution pension plan. Under the defined contribution plan, individual's pension amount completely depends on their investment outcomes rather than a fixed amount based on their pre-retirement earnings. This greater reliance on individual savings has made retirement planning an important indicator for individual's well-being after retirement.

The financial insecurity after retirement among the Chinese migrant-workers affects roughly 1/3 of Chinese families. Rural-to-urban migrant workers, though working in urban areas, generally do not participate in urban defined contribution retirement schemes (Zhang and Zhao, 2008). This is because migrant workers are either not offered such benefit options or they generally hold little trust and confidence in receiving future pension benefits from their urban employment, due to the non-portable characteristic of social benefits in hukou system. To cut the labor cost, employers generally do not intend to contribute 20 percent for migrant workers' defined contribution as recommended by the Central Government, nor do the migrant workers have the willingness or ability to put aside 8 percent of their income for future retirement. Consequently, it is common that migrant workers and their employers would make a mutual agreement that the workers voluntarily opt out of a work contract and the associated social benefits of the urban defined contribution retirement schemes to increase migrant workers' take-home pay to cover the high living costs in urban areas as well as their children's education (Zhao

et al., 2010; Wang, 2012; Guo et al., 2018;). After decades employed in urban labor force, can migrant workers afford retirement? In the age of China's rapid urbanization and population ageing, rural adult children are increasingly unavailable for provision of parental care and support (Cong and Silverstein, 2009; Luo and Zhan, 2012). To understand the double jeopardy of aging and declining adult children's availability of filial piety, I will start with a review of prior research related to factors influencing migrant workers' retirement savings.

5.2.2 Demographic Variables and Retirement Savings

Demographic variables, such as age, gender, educational attainment, occupational type, have long been identified as crucial factors that influence individual's saving behaviors. In general, older age (Ge et al., 2012), being male (Yu et al., 2015), having higher educational attainment (Lusardi and Mitchell, 2007), and working in job types with better pension benefits (Nielson et al., 2005) are associated with increased retirement savings. Cohorts of migrant workers approaching old age in China today are more aware of the possibility that they may need to be more self-sufficient and rely less on children's help in old age, as rural adult children are becoming less available for parental care and support (Luo and Zhan, 2012). The long-standing gender gap in earnings suggests that men's average earnings are higher than women's, and thus men are likely to have more money to set aside (Yu et al., 2015). Higher educational attainment is positively associated with financial knowledge and literacy, thus greater likelihood for having retirement savings. (Lusardi and Mitchell, 2007). Finally, the chance of having savings increases if employers offer better savings plans for pensions (Nielson et al., 2005).

5.2.3 Financial Status and Retirement Savings

Financial status has been measured in various ways throughout the literature, including objective measures of financial portfolios and subjective reports of financial well-being from

research participants (Martos and Kopp, 2012). Objective measures of financial status include one's income, fixed assets, investments, or anything that reflects individual's financial ability to handle expected or unexpected life crises and hardships. Subjective measures, comparatively, capture individual's perception of their own financial ability in the face of life hardships. The previous empirical studies have found strong evidences for the predictive roles of both income and homeownership for saving behaviors. With all else being held equal, higher income (Stratford and Cowling, 2016) and higher house value (Munnell et al., 2001) are associated with better chance of having retirement savings. This is also applicable to the Chinese migration workers. Better financial status gives them better chances of handling the higher living expenses in urban areas and eventually having surplus to save for retirement.

5.2.4 Length of Work Experience and Savings Behavior

Length of work experience is shown to be another influential factor for saving behaviors. However, how they are associated remains contested in the previous literature. Some scholars argue the relationship is linear: the longer the period of migrant work and its exposures to poverty and injury risks, the more likely that migrant workers realize the importance of saving, thus, are more likely to save more (Wu et al., 2014). Others believe that the relationship is U-shaped rather than linear (Xiong et al., 2014). Migrant workers tend to save as much as possible at the beginning of their career for precautionary purposes and future planning (Giles and Yoo, 2007). However, their savings drop sharply because of the expenses for housebuilding in their rural hometowns. The long-standing institutional barriers (i.e., hukou and social discrimination) keep migrant workers from full integration in city lives. migrant workers tend to consider urban areas as workplaces rather than a residence or home. Therefore, most of them plan to save funds for housebuilding in their rural hometowns, where preexisting social networks and farmland

provide them a stronger sense of long-term security (Xiong et al., 2014). Some migrant workers report limiting their daily meals and expenditures in order to maximize such savings (Feng and Li, 2018). After the savings are used up for building rural homes, they may then start to save for other purposes.

5.2.5 Social Support and Retirement Savings

The term ‘social support’ encompasses the network and resources within an individual’s social world that can promote well-being or increase resilience to adverse experiences (Cohen et al., 2000). Among all measures of social support, received social support is considered the most appropriate because it measures the actual support occurred (Barrera, 1986). Pleasant relationships with families, friends, and colleagues are also important, because they are potential sources of social support. It is widely believed that social support has an impact on individual’s retirement savings because it provides a social norm for people to comply with and offers help to individuals when needed (Henkens, 1999; Van Dalen et al., 2010).

In the case of Chinese migrant workers, the role of social support seems particularly important. As a marginalized group, various institutional and social obstacles across the society keep them from integrating into city lives (Wang and Fan, 2012). Support from families, friends, employers, and colleagues over the course of such challenges can improve outlooks and capacity to tackle uncertainties and life stressors that they face. The importance of social support to retirement savings is quite consistent in Western and the Chinese literature. Using a combined sample of American and Dutch working adults, Hershey et al. (2010) found that individuals with more social support from family or friends are more likely to participate in savings for retirement, and such effect is salient even after controlling for specific psychological and

institutional factors. Chou et al. (2014) further added that social support may even affect the size of retirement savings once people start engaging in retirement savings.

5.2.6 Hopefulness toward Retirement and Retirement Savings

Snyder et al. (1991: 571) defined hopefulness as “a cognitive set that is based on a reciprocally derived sense of successful agency and pathways”. Three major components constitute hopefulness in Snyder’s concept: (1) goals that human agency wishes to achieve; (2) pathways to achieve the goals; and (3) agency’s effort to initiate and sustain actions to achieve desired goals.

Being hopeful and having a positive attitude toward retirement is one of the essential factors that influences individual’s retirement saving behaviors, because it triggers motivations and actions for achieving the desired goals (Macinnis and Chun, 2007). Individuals with a higher level of hopefulness toward future retirement are not only more likely to save for retirement, but also tend to save more as compared to those with a lower level of hopefulness toward future retirement (Nenkov et al., 2009). Highly positive and hopeful individuals are more likely to keep high motivations in achieving their desired goals, and thus are more likely to actively make efforts to achieve their goals. Individuals with lower levels of hopefulness, on the other hand, lack such motivations and actions.

A higher level of hopefulness, however, is by no means developed without foundations; rather, it is closely tied to one’s current life situation (Snyder, 1999). Individuals set goals and plan possible pathways to achieve goals based on their specific life situations to make sure that the goals are attainable. With a different attitude, the saving behaviors of individuals with similar life experiences may differ significantly. Positive individuals may consider negative life

experiences as challenges, rather than threats, and evaluate and respond to them in positive ways (Rubin, 2001; Tugade and Fredrickson, 2004).

Based on the previous literature, this study proposes the following 4 hypotheses. These hypotheses address the relationship between migrant worker's financial status, length of work experience, social support, hopefulness toward retirement and retirement savings:

Hypothesis 1: Migrant workers' financial status is positively associated with retirement savings. Better financial status is associated with having retirement savings.

Hypothesis 2: Migrant workers with longer years of working experience are more likely to have retirement savings.

Hypothesis 3: Migrant workers who received more social support and reported to have a good relationship with colleagues and employers are more likely to have retirement savings.

Hypothesis 4: Migrant workers with a higher level of hopefulness toward retirement are more likely to have retirement savings.

5.3 Methodology

In the following section, I'll first introduce the quantitative methodology, followed by the qualitative methodology.

5.3.1 Quantitative Dataset and Sample

This paper utilizes data from the Survey of Chinese Migrant Worker's Sustainable Livelihoods, a cross-sectional dataset collected by a university in central China. This dataset was designed to provide information on health status, financial well-being, retirement planning, and migrants' attitudes towards future retirement livelihood in China.

Surveys were conducted in 2018 in three major Chinese migration/emigration provinces in mid- and southern China: Anhui, Sichuan, and Henan provinces. Respondents were selected

using key criteria of age, rural residency, and migrant worker experience. Age criterion was set at age 45 and above. Residence is set by legal rural residents (or hukou) in the above three provinces, and migrant-work experience is to have at least one year of experience undertaking migrant work. Because over 50 percent of working age population in these provinces are working as migrants in various provinces (Qiu et al. 2020), random sampling is not feasible. Data collection is best accomplished during holidays or around the Chinese New Year when migrant workers were more likely to have returned home. Data were collected via home visits through interviews in Chinese by a group of trained researchers from a university in central China. Respondents were informed the purpose of the survey and ensured the anonymity and confidentiality of their responses at the time the surveys were conducted. A total of 1,200 respondents were identified, 1,083 respondents completed the survey, 117 did not complete the survey. Among the 1,083 respondents, 600 were from Anhui, 300 from Sichuan, and 183 from Henan Province. Among them, 73.8 percent of the respondents were male, 26.2 percent female. Respondents who provided invalid answers were treated as system missing and were excluded from the statistical analyses. After listwise deletion, only those who did not have missing data on any measures contributing to the dependent, independent, and demographic variables were included. The final sample size was 699.

5.3.2 Measurement

Retirement saving is the dependent variable in this study. Respondents were asked ‘have you put away money for retirement?’ This includes both the retirement savings under public pension schemes and any other retirement savings in private saving accounts. ‘Yes’ was coded as ‘1’ and ‘no’ was coded as ‘0’.

Three indicators were used to measure respondent's financial status: monthly income, housing property value, and self-perceived financial status. For monthly income, respondents were asked 'what is your monthly income at present? If currently not working, what was your monthly income for your most recent job?'. Based on China's urban average pay standard, below 3000 RMB was coded as low income, 3001-5000 RMB was coded as medium income, with high income (5000+ RMB) as the reference category. For housing property value, respondents were asked 'what is the estimated value of your housing property'. Below 100,000 RMB (below \$14,265) was coded as low, 100 to 150,000 was coded as medium (\$14,265 to \$21,429), with high house value (above 150,000) as the reference category. For self-perceived financial status, respondents were asked 'how do you rate your current financial condition?' Responses were coded into poor, with good as the reference category. There were over 210 respondents who rated their financial condition as 'not sure'. Because the nature of employments among migrant workers are highly unstable and insecure, having difficulties estimating their financial conditions may reflect the reality of their unstable condition. 'Not sure' thus was kept as a valid category.

Length of work experience was measured by their self-reported years of work experience as migrant workers. It was coded into five years or below and six to nine years, with ten years and above as the reference category.

Social support was measured by three indicators: social support received, relationship with employers, and relationship with colleagues. Social support received was measured by three independent questions asking, 'how much support did you receive from your families/friends/neighbors when needed?'. Response categories were ranging from 1 to 4, with 1 representing the lowest level and 4 representing the highest level. Based on the results from factor analysis and reliability test, the above three variables emerged as one factor and had a

Cronbach's alpha of .636, and thus were combined into an index labeled social support received. The question wordings for self-perceived relationship with employers and self-perceived relationship with colleagues were quite similar. Respondents were asked 'how do you rate your relationship with your employer/colleagues?' Responses were dichotomously coded as good, with poor as the reference category.

Hopefulness toward retirement was a continuous variable, asking respondents to rate 'how do you feel about your upcoming retirement?' It is a continuous variable ranging from 1 to 4, '1' representing the lowest and '4' representing the highest value of being positive and hopeful toward retirement.

Demographic variables, including age, gender, educational attainment, work type, were used to understand confounding influences and to reduce the chance of spurious inferences. Age was coded into 51-60, and 61 or above using respondent's self-reported date of birth, with 50 or below as the reference category. Gender was coded as male (=1), with female as the reference category. Educational attainment was coded into middle school and elementary school or below, with high school and above as the reference category. Work type was coded into service jobs and other work types, with construction workers as the reference category.

5.3.3 Statistical Analysis

Using SPSS version 25, binary logistic regression was used to test the influence of respondent's financial status, length of work experience, social support, and hopefulness toward future retirement on their retirement savings. Four nested models were estimated. Model 1 only had demographic variables and financial status (monthly income, house value, self-perceived financial status). Model 2 added in respondent's length of work experience. Model 3 further included respondent's social support (social support received, relationships with colleagues,

relationships with employers), and model 4 added in respondent's hopefulness toward future retirement.

5.3.4 Qualitative Data Collection

Quantitative findings provided the understanding that income, social support, and hopefulness toward retirement are correlated with retirement savings. But, how and why? To gain additional understandings of the social context regarding migrant workers' retirement savings, researchers who collected the data drew a qualitative sample after survey data analyses. They focused on 3 key variables that correlated to retirement savings: income, social support, and hopefulness toward retirement. The core research questions were: how is financial status related to retirement savings? How does social support play a role in retirement savings? How does migrant workers' hopefulness toward retirement influence their retirement saving behaviors? In addition, why are so few migrant workers buying into the New Rural Endowment Insurance? The concept of theoretical saturation was utilized in identifying the study subjects and sample size (Strauss and Corbin, 1998). When the theoretical saturation was researched, i.e. no additional new information can be drawn from the interviews, about one core theme, such as the relationship between financial status and retirement savings, through repeated questions, interviewers then moved onto the next core theme, such as social support and retirement savings. Consequently, 40 taped interviews were conducted. Among them, 30 most relevant interviews for data analysis were selected. I transcribed these 30 interview-data into Chinese verbatim. Data analysis was based on Chinese verbatim to avoid loss of meaning in the process of translation. Data analysis started with a thematic scheme (level 2) since the interviews started with core themes and questions. Then I started open coding under each theme to explore variations within,

followed with axial coding (Ganapathy 2016: 108). Finally, theories emerged to show a much fuller understanding about retirement savings among migrant workers.

5.4 Results

In the following section, I'll first introduce the quantitative results, followed by the qualitative results.

5.4.1 Quantitative Results

Table 3 shows the descriptive statistics for all variables used. In answer to the question: have you put away some money for retirement? 62.7% of respondents said "NO". Only 37.3% of the respondents gave a positive answer. Most of this sample were male (73.7%), and manual workers (61.5%). Among all migrant workers, less than half (44.6%) were in their 40's (between 45 to 50), a similar percentage (44.5%) were in their 50's (between 51 to 59), and 10.9 percent were 60 and above. Half of the respondents (50.6%) finished middle school, over a third (36.3%) had only elementary school certificate or below, and 13 percent had a high school diploma or college degree.

Among the respondents, nearly 40% reported low income, another 39.9% reported medium income, followed by 20.2% who reported high income. In terms of house value as a measure of fixed assets, nearly half (49.4%) reported having low house value, followed by 29.3% with medium house value, and 21.3% having high house value. Based on monthly earnings, fixed assets, and spending, one in five (20%) percent reported 'good' self-perceived financial status, 64.5% reported 'poor' self-perceived financial status, and 15.5% were "not certain" in their financial status. Among all, 61.5 percent reported having at least 10 years of working experience as migrant workers. 58.5 percent reported having a good relationship with colleagues, but only 41.8 percent reported having a good relationship with the employer. The

average score for the social support index was 2.4 on a 4-point scale, with a standard deviation of 0.6. The average score for hopefulness towards a retirement future is 2.7 on a 4-point scale with a standard deviation of 1.1.

Table 3. Descriptive Statistics

	% (N)	M(SD)
<i>Have Retirement Savings</i>		
Yes	37.3% (261)	
No	62.7% (438)	
<i>Age</i>		
50 or below	44.6% (312)	
51-59	44.5% (311)	
60 and above	10.9% (76)	
<i>Gender</i>		
Male	73.7% (515)	
Female	26.3% (184)	
<i>Education</i>		
Elementary school or below	36.3% (254)	
Middle school	50.6% (354)	
High school or above	13% (91)	
<i>Work Type</i>		
Workers	61.5% (430)	
Service staff	12.9% (90)	
Others	25.6% (179)	
<i>Monthly Income</i>		
3000 or below	39.9% (279)	
3001 to 5000	39.9% (279)	
5000 and above	20.2% (141)	
<i>House Value</i>		
100k or below	49.4% (345)	
101k to150k	21.3% (149)	
151k and above	29.3% (205)	
<i>Self-perceived Financial Status</i>		
Good	20.0% (140)	
Poor	64.5% (451)	
Not Sure	15.5% (108)	
<i>Length of Working Experience</i>		
5 years or below	21.9% (153)	
6 to 9 years	16.6% (116)	
10 years and above	61.5% (430)	
<i>Self-perceived Relationship with Colleagues</i>		
Good	58.8% (411)	
Poor	41.2% (288)	

<i>Self-perceived Relationship with Employer</i>		
Good	41.8% (292)	
Poor	58.2% (407)	
<i>Social support</i> ¹		2.4 (0.6)
<i>Hopefulness toward Retirement</i> ²		2.7 (1.1)
Notes: N= 699. ¹ Range= 1.0-3.0. ² Range= 1.0-4.0.		

I conducted Chi-square analyses between all the categorical independent variables and the dependent variable. Statistical significances were observed in respondent's age ($p < .05$), educational attainment ($p < .01$), work type ($p < .05$), monthly income ($p < .000$), house value ($p < .05$), self-perceived financial status ($p < .000$), and relationships with employer ($p < .000$) between those who have retirement savings and those who do not (Table available upon request). I also performed bivariate correlation analysis to check for possible multicollinearity. Findings showed that all variables were significantly correlated with retirement savings, except respondent's gender, length of work experience, and relationships with colleagues (Table Available upon request). Across independent variables, either no or weak significant correlations were found, thus no potential multicollinearity issue was detected.

Table 4. Binary Logistic Regression Models Predicting Retirement Savings (N=699)

	Model 1	Model 2	Model 3	Model 4
<i>Age (ref.= 50 or below)</i>				
51-59	1.617 (.179)**	1.627 (.179)**	1.634 (.182)**	1.628 (.184)**
60 and above	1.151 (.295)	1.145 (.296)	1.088 (.301)	1.069 (.305)
<i>Male (ref.= female)</i>	.712 (.216)	.724 (.217)	.687 (.223)	.698 (.225)
<i>Education (ref.= high school and above)</i>				
Elementary	.706 (.269)	.721 (.269)	.685 (.279)	.655 (.283)
Middle school	.533 (.255)**	.542 (.257)**	.478 (.265)**	.462 (.269)**
<i>Work type (ref.= worker)</i>				
Service staff	1.089 (.293)	1.077 (.293)	.958 (.302)	.939 (.305)
Other types	1.223 (.201)	1.229 (.202)	1.222 (.207)	1.219 (.209)
<i>Monthly income (ref.= high)</i>				
Low	.360 (.238)***	.350 (.241)***	.371 (.244)***	.380 (.247)***
Medium	.523 (.225)**	.516 (.226)**	.541 (.230)**	.543 (.233)**
<i>House value (ref.= high)</i>				
Low	.956 (.204)	.933 (.206)	.977 (.211)	1.063 (.214)
Medium	1.625 (.236)*	1.620 (.238)*	1.750 (.243)*	1.748 (.245)*
<i>Self-perceived financial wellbeing (ref.= good)</i>				
Poor	.356 (.210)***	.362 (.210)***	.341 (.219)***	.387 (.224)***
Not sure	.473 (.283)**	.480 (.284)**	.457 (.289)**	.483 (.294)*
<i>Length of working experience (ref.= 10 years and above)</i>				
5 years or below		1.135 (.215)	1.188 (.220)	1.139 (.224)
6-9 years		1.238 (.234)	1.337 (.239)	1.286 (.241)
<i>Social support index</i>			1.624 (.149)**	1.634 (.152)**
<i>Good self-perceived relationship with colleagues (ref.= poor)</i>			1.080 (.184)	1.005 (.188)
<i>Good self-perceived relationship with employers (ref.= poor)</i>			1.631 (.179)**	1.464 (.184)*
<i>Hopefulness toward retirement</i>				1.315 (.090)**
Nagelkerke R Square	.145	.146	.182	.199

Notes: 1. *** p<.000; ** p<.01; * p<.05. 2. The numbers displayed in the table are Odds Ratio (Standard Error)

Table 4 shows the odds ratio and the standard error for the effects of financial status, length of work experience, social support, and hopeful attitudes toward retirement on retirement savings after controlling for respondent's demographic characteristics. Model 1 showed that respondent's income, house value, and self-perceived financial status have significant effects on retirement savings, after controlling for their age, gender, educational attainment, and work type. The odds for having retirement savings are 64 percent and 47.7 percent lower for migrant workers making low level and medium level income, respectively, as compared to those making high level income. Migrant worker possessing medium level value houses are 62.5 percent more likely to have retirement savings than those whose house-values are high. Lastly, the odds for having retirement savings are 64.4 percent and 52.7 percent lower for migrant workers who rated their financial status as low and not sure respectively, as compared to those with high self-perceived financial status. Findings in this study partially support hypothesis 1: migrant workers' financial status influence their retirement savings. Among the three financial status indicators, income and self-perceived financial status are positively associated with retirement savings; however, higher house value does not necessarily indicate better retirement savings.

Model 2 added migrant worker's length of work experience into the model, but no statistical relationship was found between length of work experience and retirement savings using this sample, thus hypothesis 2 is rejected.

Model 3 showed that social support played a significant predictive role in retirement savings. For each one unit increase in migrant worker's social support score, there is a 62.4 percent increase in the odds of having retirement savings, after all other indicators are held equal. For those who reported good relationships with employer, their odds of having retirement savings are 63.1 percent higher than those with poor relationships with employer. However, no

statistical relationship was found between relationship with colleagues and retirement savings, thus hypothesis 3 is also partially supported.

Model 4 further added migrant workers' hopefulness toward future retirement into the model. For each one unit increase in migrant worker's hopefulness toward retirement, there is a 31.5 percent increase in the odds of having retirement savings, after holding all other variables equal, thus, hypothesis 4 is supported.

One interesting finding in this study was that age cohort difference in retirement savings remained salient even after controlling for all independent variables, suggesting an age cohort effect in retirement savings among the Chinese migrant worker population. According to the results from model 1 to model 4, the odds for migrant workers between age 51 to 59 to have retirement savings are approximately 61 percent to 63 percent higher than the odds for those who are age 50 or below. Educational attainment was another significant predictor for retirement savings across the four models. Specifically, the odds for migrant workers with middle school education to have retirement savings are approximately 42 percent to 46 percent lower than the odds for those who have high school or higher diploma, suggesting that the significant disadvantages that individuals with lower educational attainment accumulated across the life course eventually have negative effect on their future retirement financial well-being.

5.4.2 Qualitative Results

In the following section, I'll present the qualitative findings under the four core themes.

Financial Status and Retirement Savings

Financial status for migrant workers mainly refers to their income and type of jobs they do. Most male migrant workers work in construction site making roughly ¥200/day while

female migrant workers generally work as janitors or cook assistant in restaurants making ¥100/day.

Ms. Chen, 48 years old, has been working as a janitor in a city for 6 years now. When she was asked if she bought retirement insurance, she said she didn't because there were so many forms to fill in. If one box was not filled, she would be denied. Furthermore, she said:

“I make only a little over ¥1000 per month. At my age, I must be grateful for this income because I would have got nothing if I just stayed at home in the village...In the beginning I didn't buy the insurance when it was offered. Now I cannot afford it anymore. I must pay tens of thousands to buy into it right now, how can I afford it? All the money I am making is just to survive...” Case 8

Mr. Zhu is a carpenter from Wuhu, working in Nanjing. He is already 50 years old. Because he had an accident, he suffers from severe back pain. He had to take off from work often, and his salary was low. When he was asked if he saved for retirement, he said he couldn't because all he could do was just to pay bills and survive (case 11). Similarly, Mr. Wu, a construction worker, who had a work-related injury, also explained his difficulty to save, due to low salary and need to help his children (case 28). Most male migrant workers, especially those working as construction workers, could afford to put aside some money for old age security. Mr. Niu is a migrant worker from Shangdong province working in Xian Shaangxi Province. He has been working there for over 10 years. His wife also works as a migrant worker. In Xian, he has been paying ¥3000 per year for the New Rural Endowment Insurance (NREI). That is ¥300 per month, roughly 5% of his income put away for retirement insurance.

Mr. Wang, at 50, started working as a migrant worker since 1993. Even though he has worked in urban areas for 27 years, he still holds a rural hukou, not qualified for urban retirement plan. When asked if he participated in the urban defined contribution plan, he answered:

“I was never told about this urban retirement plan for workers in the city. But I have participated in the NREI. I contribute ¥300 per year. I also bought an old-age insurance in the private insurance market for me and my wife. We must pay ¥100,000 yuan in total for each of us. It took me 5 years to pay it off, it will take 10 years for her, she has a few more years left to pay it off. By the time we are 60, we should be able to receive at least ¥1000 per month each. When we reach age 70, there will be a 10% increase. By the time we are age 80, the ¥100,000 we have paid in will be returned to us, and we can continue to receive pension beyond that. I figure, when we retire, my wife and I should have at least ¥2000/month for our pension, plus the social assistance of Old-age Basic Pension. We should be okay. We don’t need to rely on children.” Case 5.

Some migrant workers make a relatively good salary in urban area. A furniture store manager, also named Mr. Wang, currently at age 49, started working as a migrant worker when he was only 22 years old. His monthly salary is now ¥15,000, roughly two times more than that of an ordinary migrant worker. He has only one daughter who is still attending college. When asked about his retirement savings, he said he saved roughly ¥1000 per month for his retirement, of which 300 was his own contribution, 700 his company’s contribution. In his words, “this social insurance is a good thing for old age financial security. I am saving it for my own old age, so I do not have to rely on my daughter when I get old.” Case 26

Financial status and income appear to play a key role in migrant workers’ ability to save. Being female, having a low monthly income, and having poor health, clearly makes it harder to

put aside some money for future retirement. On the other hand, when migrant workers were able to make a higher income, especially when they were able to participate in an urban employee's retirement plan, their monthly contribution to a defined contribution is matched by the company. They are much better off than those who must contribute every penny of the retirement insurance by themselves.

Social Support and Retirement Savings

Most rural residents working in urban areas are only qualified to buy into New Rural Endowment Insurance even though they have worked in urban areas for decades. Sometimes, having good social relationships may help channel these migrant workers to other better retirement saving options. The furniture manager in this study is one of those fortunate ones who was enabled by his employer to buy into urban retirement plan. When employers are not willing to contribute retirement insurance for migrant workers, sometimes, rural migrant workers work out affiliations with a private company. Mr. Zhang is a 53-year old man; he has worked as a migrant worker for over 30 years. With 30 years living in urban areas, he built up various social support networks or *guangxi*; consequently, he was able to use his support system to find an affiliation in a private company to buy into urban defined contribution plan. When asked about his retirement savings, he said:

“Through an affiliated company, I put aside 7200 yuan per year; my wife also found an affiliated company to save for Social Insurance. My wife paid a lump sum of 90,000 yuan. When she turns to 50 years old, she will be able to receive 800 yuan per month. At our age, we really need to start thinking for ourselves...we cannot expect that our children will take care of us. Our son is buying a flat in Hangzhou (outside the province), we have to rely on ourselves.” Case 16.

In the beginning of the national retirement pension, many rural residents did not have faith in the system, so they did not participate in the NREI at first. However, when a family member started to receive a retirement pension, this reality motivates some migrant workers to actively get involved in the NREI. Mr. Chen told the story about his older brother and his wife who are now retired. They both paid roughly 40-50,000 yuan into the retirement insurance. They have been receiving pension every month.

“My older sister-in-law started to receive pension at age 50, ¥ 1000 per month.

The ¥ 40,000 investment they put in has long been returned. They rely on this pension in their old age. So, I persistently pay ¥ 670 per year into our retirement insurance for me and my wife. When we reach 60 in a few years, we will be able to live on our pension.”

Case 3.

Social support can be found from the workplace, social network, or neighbors and extended families. When siblings and neighbors have started receiving old age pension, many rural migrant workers become more motivated in participating in retirement insurance. Buying into the urban retirement system take a long bureaucratic procedure. Very few, 3 among the 30 interviewed, were able to navigate through the system and land an urban hukou to buy into urban defined contributions for which employee and employer co-pay for retirement insurance. Two migrant workers, though unable to obtain urban hukou, were able to sign onto a private insurance plan through working out an affiliation with a private company. Social support system can work as peer pressure, encouragement, affiliation, and liaison for migrant workers to enter the retirement system.

Hopefulness toward Retirement

Retirement is a totally new concepts for most of rural migrant workers. As discussed earlier, in the 1990's the government first promoted a retirement insurance for rural residents. After years of implementation, participants received nearly nothing in returned (Geng 2009). Confidence and trust in the program were low (Wang 2020). In 2009, the New Rural Endowment Fund was rolled out, it understandably encountered wide-spread suspicion from farmers in rural China due to the failed effort in the 1990s. Ms. Tao is a 55-year old woman, recently widowed. She works as a janitor at a university where her daughter works as a faculty. Her monthly salary is ¥2500. When she was asked about whether she saved for retirement, she said:

“I did hear about the New Rural Endowment Insurance (NREI) a few years ago.

The Party secretary in my rural village sent out some propaganda, asking if we were willing to buy old-age insurance. We were not forced to buy it. When I first heard about old age insurance, it sounded like a scam. I didn't believe in it. Who would know that it was real and important?! Now my son said that he would like to pay a lump sum of ¥50,000 to make up the difference of the required insurance contribution. But how can we have this much money?! I said, let's wait until we are a little better financially...” Case 6

Mr. Guo, age 54, is another migrant worker who expressed doubt about the insurance system. At first, he did not buy into the retirement insurance. When many rural neighbors started to receive pension, he started to see that it was real. He said, “Earlier, I didn't want to put money into it. Can you really get back the money you put in after age 60? Can you really trust the government? Now more and more people are paying into it. I also started to pay into it 4-5 years ago.” Case 15.

Ms. Jin works in a leather-shoe factory. She heard about urban residents' retirement pension; but said that she had no chance of getting it because of her rural hukou. When asked if she participated in the New Rural Endowment Insurance, she said:

“How can you not participate in it?! If you don't pay it, your parents won't get the ¥70/Month Basic Old Age Assistance. You have to pay for it—it's bundled. At the end of the day, I have no idea whether or not I will be able to receive anything in my old age, plus, my original birthplace is in Guizhou, another province, not in the same province I am paying the Endowment Insurance. Where will I receive it, in Anhui or Guizhou? I have no idea. I will have to get it to believe in it.” case 20

Echoing what Ms. Jin said about the government implementation techniques of bundling retirement insurance contribution with elderly parents old-age assistance, Mr. Li, 48, a construction worker who has worked in urban areas since 1994, made the following statement:

“I never heard my boss telling me about urban employee's retirement. However, I did pay into rural retirement pension in my village. I started in 2010. At first, I paid only ¥100/year, then, 200, now 300. I have paid into it for 10 years. At first, I had to pay to a person in the village, now, I can just do it using the cell-phone app. I cannot get away from it. If I don't contribute, my elderly parents will not be able to receive that Old-age Basic Pension of ¥70/month. So, we are sort of forced to participate, unless you don't want to be filial to your elderly parents.” Case 24.

Migrant workers' hopefulness toward retirement contribution appear to be drenched with distrust, disbelief, and doubt. However, many migrant workers did make minimum contribution toward the New Rural Endowment Insurance, partially due to the polity implementation strategy of bundling insurance contribution with elderly parents old-age-pension assistance. Among

migrant workers who made a better income, many voluntarily participated in retirement insurance, some influenced by family members, others by an emerging sense of need in the future accompanied with the awareness of children's decreasing availability in their old age. Many more migrant workers, however, put off savings for their own retirement because of their strong sense of duty toward their children.

Housing, Intergenerational Support, and Retirement Savings

Although more and more migrant workers have started to see the importance of saving for retirement, many are still deeply entrenched in the traditional pattern of intergenerational support. Mr. Chen, age 52, is a construction worker from Wuhu, Anhui province. When asked about his retirement savings, he said, no, it was not yet his time to save for retirement. There were many other important matters that he had to prioritize before he could save for his own retirement.

“I have a son of 28 years old, still not married. I originally saved some money to build a house in my hometown. Nowadays, you've got to build a new house—every family is building a new home. Otherwise, you are looked down upon. We also bought a new flat of 100 square meter in size in the city, costing over ¥400,000. My daughter is attending school right now, costing ¥20,000 per year; the third child, a son, is also going to school, costing ¥30,000 yuan per year. Just for tuition and fees, I have to spend ¥50,000 per year. I have no money left to save for retirement. Someday, when kids have graduated and started working, and then got married, no longer need my financial support, then, it might be my turn to save for myself. I have no idea how long it will take...” Case 3.

Similarly, Ms. Cao, at age 52, explained her expenditure on her children's housing and marriage.

“I make about ¥50,000 yuan per year from working as an on-site cook in the construction site. All my savings was first spent on my son's wedding, which was over ¥50,000 yuan. Then, we spent lots of money building a house in the village for the son. After the second son decided to settle down in the city, we again spent hundreds of thousands of yuan to help him buy an apartment in the city. We still owe debt; how do we have money to save for retirement?” Case 4.

Mr. Zhou, a home-renovation worker, was already 57 years old at the time of interview in 2020. When asked if he had saved for his retirement. He said:

“Savings are all for our children. Children need to get married, have housing to live, all our savings are used to help our children. We cannot possibly save for ourselves yet. It is not time to save for ourselves. Children must live a good life before we can consider ourselves. You see, one of our kids just said that he wanted to buy a flat in the city, don't we have to help him?! They work very hard. What is our savings for, right now? We've got to help them...” case 7.

Mr. Zhou's words pretty much summarized the priorities of the aging generation of migrant workers. They work to save for their children. Savings for their own retirement is the last in their priority list. While faith in the government and a higher level of hopefulness toward retirement savings did matter, many, if not most migrant workers, did not save for their own retirement because they had “more important matters in life,” that is, the duties and obligations toward their children's education, housing, and marriage.

5.5 Discussion

This study utilized mixed methods to explore the relationship between migrant workers' work experience and their retirement savings. Qualitative findings have added contextualized understandings of quantitative findings for this special population of rural migrant workers who are struggling in the midst of the clash between the traditional Chinese culture and emerging social structural changes as a result of the retirement insurance policy. To understand this clash, it is essential to dissect the four interactive forces that shape migrant workers retirement future.

5.5.1 *Financial Status and Retirement Savings*

This study lends support to previous literature that better financial status is correlated with retirement savings (Stratford and Cowling, 2016). Migrant workers with higher income, as shown in quantitative data, are more likely to save for retirement, because saving for retirement is simply more affordable to do for them. Meanwhile, qualitative data have also shown that the furniture factory manager and tele-communication employee who make high monthly income, were consciously saving for their old age. They made a clear link between their own saving behaviors and financial independence in old age. Increasing numbers of migrant workers in construction were participating in New Rural Endowment Insurance, sometimes, even paying a lump-sum to enroll in the retirement insurance. However, low income earners, very often male workers who have poor health or experienced work-related accident and disability, or female migrant workers who make very low income, or widowed, are struggling to survive. Paying into future retirement insurance was unrealistic for them. They continue to put their hope in their children for their old age. In some cases, their spouse put aside some money for their old age, explicitly saying that they would not expect their adult children to care for them in old age. This study sample included only 30% of female participants, partially because women are more likely

to be left in the village to raise children and take care of the older generation, future research may further explore this topic, expanding on the research of gendered retirement in rural China.

5.5.2 Intergenerational Support and Retirement Savings

Recent research has shown that migrant workers are heavily involved in downward support for children's education and marriage, rather than their own old age security (Qiu et al., 2020). The cultural practices of patrilocal family tradition expect that groom's parents purchase the house for the young couple's marriage (Wang, 2014). The amount of money needed to meet this expectation is overwhelming if a migrant worker has 2 or 3 sons. As shown in quantitative findings, migrant workers in their late 40s are less likely to save for retirement because they are still heavily involved to help with children's education, marriage, and housing. Migrant workers above age 50 who have accomplished their goals of helping children have a better chance to start saving for their own retirement (Deng & Meng, 2008). Unfortunately, there are limited number of years left for them to work and save because there is an explicit age-discrimination against older migrant workers. Most construction companies or factories stop hiring migrant workers above 55 to reduce liability (Zeng, 2006). It is likely that their income from remaining working years are insufficient to build a desired level of old age security. Furthermore, fewer adult children are available to fulfill the traditional filial obligations to their elderly parents due to the massive rural-to-urban migration (Cong and Silverstein, 2009; Luo and Zhan, 2012). The qualitative findings have provided additional support in this downward transfer of wealth from the aging migrant workers to their children. For many migrant workers, saving for their own retirement is still at the bottom of their priority list; they feel obligated fulfil their parental duties of children's education, marriage, housing first. With the continued cultural expectations and limited savings, how would migrant workers approaching old age manage their financial well-

being after returning to their rural home? This is not just an issue of individual migrant workers, but a macro-social problem facing millions of migrant workers who are approaching retirement age.

5.5.3 Social Support and Retirement Savings

Both quantitative and qualitative findings in this study have revealed the importance of social support on retirement savings among the Chinese migrant workers. This social support can be direct financial support from spouse, coworker, or employer; sometimes, this support may come from peer pressure, extended family members, and neighbors. As shown in both quantitative and qualitative data, more social support received and better relationships with employers make a better chance for migrant workers to have retirement savings. In some cases, migrant workers were enabled to buy into urban retirement plan; other times, they were able to find private companies to sponsor them as an affiliate to make their own retirement contribution. This is consistent with several previous research findings that individuals with more support from social networks are more likely to participate in savings for retirement (Hershey et al., 2010). Duflo and Saez (2002) specifically examined the effect size of peer influences on saving behaviors. They found that when the participation of saving of one's peer group increases by 1 percent; one's own participation of savings increases by 0.2 percent. Social network in such case has provided a beneficial social norm for individual to comply with (Henkens, 1999; Van Dalen et al., 2010). Few migrant workers are offered work contract because employers want to minimize the labor cost by opting out pension and other social benefits provisions (Zhao et al., 2010; Wang, 2012). Having a good relationship with employers potentially increases migrant workers' opportunity to be offered social benefits, thus increasing their chances of having retirement savings.

5.5.4 *Hopefulness toward Future Retirement*

Both quantitative and qualitative findings of this study also lend supports to the previous literature regarding the influential role of hopefulness toward retirement on retirement savings (Nenkov et al., 2009). Controlling for other indicators of migration experience, a higher level of hopefulness toward future retirement is associated with a better chance of having retirement savings for Chinese migrant workers. Scholars have believed that a positive attitude contributes to inspire one's motivations and thus actively make efforts to achieve the desired goals (Rubin, 2001; Tugade and Fredrickson, 2004; Macinnis and Chun, 2007). For centuries, Chinese farmers have relied on the tradition of adult children's filial piety in old age. Retirement as a concept did not even exist in rural China until very recently. The study findings have shown, vast majority of migrant workers still are heavily invested in their children's future, not just their own retirement future. Only 37% of migrant workers said "yes" to "having retirement savings." Yet, as income increases, and options of buying private and urban retirement pensions have become available, more and more farmers have started to have faith in the notion of retirement when they see their older neighbors, friends, extended families have started to receive old age pension. Quite a few interviewees started to talk about relying on themselves, even though they still hope to live with their adult children. Some are foreseeing their future living alone without their adult children in the same household, because, as many said, their sons have already bought a flat in the city. There appear to be a cultural shift in old-age support, from adult children to the public sector of old age pension.

Chinese migrant workers' aging experience very well demonstrate Dannefer's cumulative advantage/disadvantage theory. Restricted by the hukou system, while residents in urban China enjoy a comprehensive set of educational resources, such as schools with high teaching quality,

study abroad programs and various extra-curriculum that help students achieve good scores at schools and develop various interests outside of schools, educational resources are sparse in rural China. Rural schools have limited classroom space, teaching facilities, and even teachers. In some extreme cases, students from the first to sixth grade share one classroom and one teacher for all subjects. The existing large gap between urban and rural in educational resources at young age directly resulted in most rural-to-urban migrant workers' position at the bottom of the labor force pyramid and working in physically and mentally demanding, dangerous, and dirty jobs with low pay in later years, which has significantly damaged their ability to save for future retirement. After realizing the decreasing availability of their adult children for parental care, some migrant workers started to save for retirement. However, for those who are able to afford to put aside a portion of their earnings in saving's account, the priority for using this fund is often given to their downward support for children's education and marriage, rather than their own old age security (Qiu et al., 2020). By the time they start to prepare for retirement, it is highly likely that their remaining years in employment are not sufficient to build desired old age security for them. Disadvantages cumulated from early childhood to retirement collectively contribute migrant workers' bleak future after retirement.

5.6 Study Limitation

This study is one of the first in the field to make a connection between Chinese migrant workers and their retirement savings. Being one of the pioneer studies, the dataset is cross-sectional, thus, any causal interpretation of the findings should proceed with caution. Future studies with a longitudinal design may better capture the relationship between migrant workers' work experience, their ageing, and retirement savings. As a preliminary study, retirement savings in this research were assessed as a binary variable, therefore, it limited the chance to see the

differences between individuals with different levels of retirement savings. However, the qualitative post-survey interviews helped deepen the understanding for the context of retirement savings. Thus, the results of this paper are insightful in understanding what motivates or burdens Chinese migrant workers to save or not save for retirement in the first place. Despite the limitations, this study contributes to disentangle the linking mechanisms of migration experience and retirement savings in China. In the process, findings reveal a clash of cultural and structural changes at this specific historical time in China.

5.7 Policy Implications and Conclusion

Findings in this study have several policy implications. First, retirement savings for migrant workers are critically important due to the decreasing number of adult children available for parental care when migrant workers return home in age old. Instead of allowing companies and workers to opt out from the defined contribution, the local and central government may need to develop a payroll tax requirement so that the workers and companies have no choice but to save for retirement before the salary is disbursed or received. The bundling of New Rural Endowment Insurance with Basic Old Age Pension appears to be effective in rural China where confidence in retirement insurance was low. Other incentives could be considered in motivating higher participation rate in retirement savings in rural China, such as matching 5 percent from the central government, requiring 5 percent from companies, and 5 percent from workers. These percentages appear to be more reasonable than 20 percent from companies or employers, and 8 percent from employees. This early investment in migrant workers' retirement insurance from the central government can be returned by using affluence test for the social assistance of Basic Retirement Pension after migrant workers reach age 60. Those whose retirement income reach a certain threshold may not need the basic non-contributory retirement assistance of 88 yuan from

the government. Instead of having greater reliance on the central government, migrant workers will eventually become more financially independent in the long run from both the government and their adult children using the incentives of defined benefit. Secondly, retirement savings should be protected from early withdrawal. Study findings have shown that migrant workers typically use their savings to buy houses for their children or pay for weddings for their sons and daughters (Deng & Meng, 2008). If retirement savings carry a penalty, like the 401K system in the United States, workers may think twice to withdraw for other purposes. Third, portability of retirement savings needs to be improved in China. Several migrant workers expressed low confidence in the retirement insurance. When migrant workers do not have confidence in the portability of their savings, they have little incentive to contribute for their retirement savings for old age.

Over 300 million migrant workers are facing challenges of financial security in old age. To alleviate migrant workers' poverty in later life, a comprehensive effort from the government policy makers, national and local banking systems, and various employers and corporations are needed. The patrilocal cultural practices, lack of adequate social policy support for migrant workers, and their disadvantageous social status are all working against their odds to have a financially secure and stable retirement life. Are these first cohorts of migrant workers who are approaching old age able to afford to retire? The answer to this question from this study is very uncertain. As shown in this study, adult children are increasingly likely to become migrant workers in urban areas. The traditional culture of filial piety is likely to decline due to the unavailability of adult children. The reliance of aging parents on adult children is likely to shift toward the public sector, on New Rural Retirement Insurance. This shift is fundamentally changing the bedrock of the traditional Chinese family. When aging parents become financially

independent in old age, will they end up spending their last days in the rural village alone or will they live in a community housing like assisted living or nursing home in the U.S.? Is retirement insurance going to break down the fabric of Chinese intergenerational support sanctioned by the thousand-year-old code of filial piety? Future studies may hopefully yield more promising answers for this generation of hard-working migrant workers.

6 PAPER 3: HOPE FOR RETIREMENT—UNDERSTANDING THE STRUCTURAL AND CULTURAL LAGS AFFECTING CHINESE MIGRANT WORKERS' RETIREMENT PLANNING: A PATH ANALYSIS

Abstract

This study aims to map the pathways from the Chinese migrant workers' migration experiences to their retirement planning. Using a sample of 1083 Chinese migrant workers from three Chinese emigration provinces (Anhui, Henan, and Sichuan), I performed path analysis to model the relationships between migrant workers' employment experience, financial status, social support, self-rated health, and hopefulness toward future retirement, and overall retirement planning. Findings reveal that majority of migrant workers reported no retirement planning. Having hope for future is essential in determining retirement planning; employment experiences affect retirement planning through self-rated health and hopefulness toward future retirement; financial status and social support received are both directly and indirectly associated with retirement planning. By mapping out the factors influencing migrant workers' retirement planning, the authors argue that a structural lag in retirement pension, healthcare portability, and work-related injury insurance are major challenges facing migrant workers. Confronted with the culture lag of filial piety as adult children have emigrated out of villages for employment, aging rural migrant workers' hopes for retirement are bleak.

6.1 Introduction

China has undergone dramatic urbanization in the past four decades (Tan, Xu, & Zhang, 2016). An important contributor to China's rapid urbanization is the massive rural-to-urban migration started in the 1980s. Shortly after the Economic Reform in 1979, farmers once strictly bounded in the collectivization system were set free for more opportunities in the urban labor force (Lin, 1988; Chan, 2001). Meanwhile, rapid economic development in urban areas has created an urgent demand for laborers (Zhao, 1999). With the hope of making more earnings, many rural surplus laborers left their farmlands and migrated to urban areas for better job opportunities. As of 2019, China has approximately 300 million migrant workers, among them, 24.6% have reached their 50s and 24.8% are between age 41 to age 50 (National Bureau of Statistics of China, 2019b).

Although migrant workers have made important contributions to China's economic prosperity, their well-being still largely falls between the cracks of the urban-rural stratification system. At a structural level, urban and rural residents under China's household registration system (hukou) have completely different social welfare benefits. Urban employees in China enjoy comprehensive welfare benefits including retirement pensions, healthcare, and educational resources for children (Chan & Zhang, 1999; Liu, 2005). In rural China, however, pension benefits were largely unavailable for rural residents before the 1990s ((Shen & Williamson, 2010; Fang & Feng, 2018). Such social benefits are also not portable as individuals migrate between different provinces or cities. Even if some social benefits are portable, they are by no means comparable to those in urban areas.

Meanwhile, China's public pension system for employed individuals requires migrant workers to contribute 8% of their monthly income; employers are expected to contribute 20% of

employees' income to put into a retirement account (Fang & Feng, 2018). However, this portion may not be affordable for both small employers and most migrant workers (Zhao et al., 2010; Gao, Yang, & Li, 2012). Many migrant workers would rather save the money to take home than contributing to their pension account (Zhao et al., 2010). Employers would generally prefer cutting labor costs by opting out of pension provision. Furthermore, many migrant workers have insufficient confidence in participating in pension schemes because the associated benefits are low and non-transferable (Nielsen et al., 2005). Migrant workers who do not make monthly contributions to pension account receive only 76 RMB/11 U.S. dollars per month after age 60. This is a non-contributory form of social assistance for all rural older adults above age 60, but it is meager and insufficient to provide old-age security. Consequently, the greying Chinese migrant workers are becoming a major concern for both policymakers and society as a whole.

Cohorts of aging rural migrant workers returning to their hometowns face a double-edged sword: their structural disadvantages in healthcare and retirement planning (structural lag), and the fact that traditional filial piety has been redefined due to the increasing unavailability of adult children for parental care (cultural lag). In this paper, the overarching research questions are: how do factors in migrants' lives (employment experiences, financial status, social support received, self-rated health, and hopefulness toward future retirement) affect migrant workers' overall retirement planning? What are the associated pathways? How are these factors intertwined with structural and cultural lags to hinder migrant workers' retirement planning?

6.1.1 Employment Experience, Financial Status, Social Support, and Self-rated Health

Self-rated health (SRH) is a self-evaluation of one's health status based on any observed and underlying health-related issues and is thus considered as the most accurate reflection of

human overall health (Idler & Benyamini, 1997). SRH is particularly important in studying health in the migrant worker population and its determinants in China because it captures both the objective and subjective aspects of health. As a marginalized group, most migrant workers suffer from low-income and poverty (Park & Wang, 2001; Liu et al., 2017) and do not possess local hukou and social welfare benefits; consequently, they have limited access to local public health services and medical insurance (Wong et al., 2007; Liu & Griffiths, 2011). Therefore, a physician's assessment of health may not be accessible to most migrant workers, nor researchers. Using SRH as a health measure in the Chinese migrant worker population enables researchers' access to the study population.

Work experiences constitute a major source of social determinants of health among Chinese migrant workers. Negative employment experiences as life stressors are health-threatening, such as working as migrant workers in demanding, often manual labor jobs, and having adverse experiences from work (work-related injuries and wage delay). Research has shown, longer years of working in a physically demanding work environment (Li & Chen, 2010; Yang, 2020) and having adverse experiences from work (Fitzgerald et al., 2013) lead to poorer health. Such experiences affect health directly by causing physical and mental harm, and indirectly, through migrant worker's limited access to local public health services and health insurance when in need of medical help (Zhang, 2012; Zhu et al., 2014). Intentionally delaying migrant worker's wages is known as a strategy that employers use to prevent workers from leaving freely, and some employers even require that new employees deposit cash as the prerequisite for hiring (Ma, 2000). All of these factors make it difficult for migrant workers to maintain good health.

In contrast, better financial status (higher monthly income and better self-perceived financial status) promotes migrant workers' health (Liu et al., 2019; Yang, 2020). Before migrating into urban areas, migrant workers' living expenses are minimal because they owned their lands and houses and produced their own grain and vegetables. After migrating to work in cities, living expenses dramatically increase as they have to pay rent, daily groceries, clothing, as well as transportation. Therefore, those with higher income or better self-perceived financial status are more likely to have better nutrition, housing, health-related investment (such as health insurance and fitness), and health management. Restricted by the hukou system, migrant workers are not eligible for urban healthcare benefits; meanwhile, purchasing commercial health insurance is not affordable or feasible. Therefore, only the very few high income-earning migrant workers can afford to use medical services since all costs must be paid out of pocket (Zhang et al., 2018).

Previous studies have also found that more social support received is associated with better health (Ji et al., 2020; Yang, 2020). Social support is particularly important for migrant workers because they have left their hometowns and familiar social networks. Having more social support means better integration into their new environment. When a health crisis strikes, social networks provide critical support and resources in their health seeking and management (Yang, 2020).

6.1.2 Financial Status, Social Support, Self-rated Health, and Hopefulness toward Future Retirement

Hopefulness was defined by Snyder (1991) as “a cognitive set that is based on a reciprocally derived sense of successful agency and pathways” (p. 571). It is a critical human psychological construct in achieving goals. However, hopefulness is by no means developed

without foundations; rather, hopefulness is closely tied to one's current life situations (Snyder, 1999). Individuals set goals and plan possible pathways to achieve goals based on their specific life situations to make sure that the goals are attainable.

Individuals with lower income and more financial pressure experience higher levels of distress and lower levels of hopefulness (Kasser & Ahuvia, 2002; Prawitz et al. 2013). Low-income earners may be unable to afford services and goods that their families need, and thus are more likely to be less hopeful toward future. Migrant workers tend to work in demanding, dirty, and dangerous jobs experiencing both physical and mental stress. They on average receive only 70% of the pay compared to their urban counterparts for the same jobs (Gao et al., 2012). Their low pay and harsh working conditions may very well translate into lower hopefulness toward future and future retirement.

The powerful role of social support in increasing an individual's hopefulness toward future is also well-known. Social support helps individuals improve their outlook and capacity to tackle uncertainties and life stressors. Even though migrant workers' social networks are confined to the scope of their co-workers or fellow villagers, the availability of a social network gives them a layer of protection in an unfamiliar environment in dealing with all types of life uncertainties and life decisions (Yang, 2020).

Among all life uncertainties, health-related issues are the most frightening and threatening to migrant workers' sense of hope for future. Previous research has found that migrant workers bear a disproportionate burden of work-related injury morbidity and represent the majority of work-related deaths in China (Fitzgerald et al., 2013). When migrant workers have work-related injuries without any insurance coverage, all costs would have to be paid out-of-pocket. Even in the cases when the injured workers are covered by work-related injury insurance,

the process of injury claims is complicated and lengthy, and sometimes may even be delayed or denied due to the employer's arbitrary and restrictive requirements. These have resulted in many migrant workers' poor health status with little hope for the future (Zhu et al., 2014).

6.1.3 Financial Status, Social Support, Self-rated Health, Hopefulness, and Retirement Planning

Previous research has conceptualized retirement planning as a set of goal-directed behaviors that individuals undertake to prepare for retirement (Noone et al., 2009). Such planning represents an individual's conscious and deliberate understanding of their own retirement and is followed by a decision-making process and specific plans to achieve desired goals (Friedman & Scholnick, 2014). By definition, retirement planning includes not only monetary savings for living costs and housing after retirement, but also strategies that deal with other life uncertainties caused by decreasing social participation and declining health status, all of which are predictive of an individual's well-being in old age. This is supported by numerous empirical studies (Wang, 2007; Noone et al., 2009; Wong & Earl, 2009). Noone et al. (2009) have found that having retirement planning is positively associated with better retirement transition and adjustment. Wang (2007) further confirmed the predictive role of retirement planning and found that people without retirement planning are associated with a higher probability of exhibiting a decline of well-being before and during retirement transition.

Previous research has indicated that migrant workers with better financial status are more likely to have retirement planning (Bassett et al., 1998), and better financial planning is associated with a lower probability of delayed retirement (Feldman, 1994). People with more social support are also more likely to prepare for retirement because social network provides a social norm for people to comply with and offers help to individuals when needed (Henkens,

1999; Noone et al., 2009; Van Dalen et al., 2010). As suggested by Noone et al. (2009), discussions with relatives and friends constitute a major information source for an individual's informal preparation for retirement. Health status shares equal importance in determining individuals' retirement planning. Taylor and Doverspike (2003) find health to be the strongest predictor for retirement age and well-being because it not only predicts people's attitudes toward retirement, but also whether and when people choose to exit the workforce. Individuals with poorer health tend to plan early as compared to their healthier counterparts, because they prefer to leave the workforce early since declining health negatively affects their work-related activities (Feldman, 1994). Previous studies have also documented the essential role of hopefulness toward future retirement on retirement planning. For example, individuals with higher levels of hopefulness are more likely to plan for retirement and stay affirmative and motivated to achieve their desired goals (Nenkov, Macinnis, & Morrin, 2009; Ersner-Hershfield et al., 2009). This empirical work provides insight into individual differences in retirement planning.

This study attempts to shed light on factors and pathways that directly and indirectly influence migrant workers' retirement planning. This study also intends to disentangle the linking mechanisms by mapping out the interconnected web of factors that affect migrant workers' health, hopefulness toward future retirement, and retirement planning. Figure 2 displays the conceptual model of the proposed structural relationships.

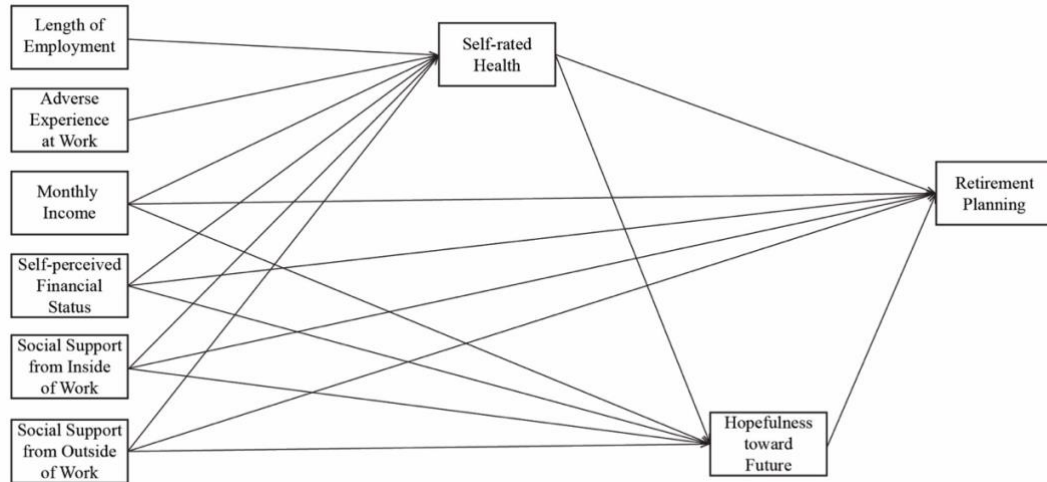


Figure 2. The Conceptual Model

6.2 Methodology

Below is an introduction of the dataset, measurement and statistical strategies used in this paper.

6.2.1 Dataset and Sample

Data are from the Survey of Chinese Migrant Worker's Sustainable Livelihoods (SCMWSL), a cross-sectional dataset that was collected by multiple trained researchers from a Chinese University. In this dataset, information pertaining to Chinese migrant worker's health status, financial well-being, and retirement planning were collected in order to examine factors influencing Chinese migrant worker's current and future well-being.

Data collection was performed in 2018 in three Chinese emigration provinces: Anhui, Henan, and Sichuan. The following key criteria were used in selecting research participants: (1) over 45 years old, (2) officially registered as legal rural residents in the above three provinces, and (3) have at least one year of experience undertaking migrant work. Since approximately 50% of the working population of the above three provinces are migrant workers, random sampling in emigration locations is not feasible. Trained researchers were sent to each province to distribute

and collect the surveys during holidays when migrant workers were more likely to have returned home. Potential research participants were informed of the purpose of the study and ensured the anonymity and confidentiality of their responses before the survey started. Informed consent was also obtained before participants took the survey. The total of 1200 migrant workers were initially identified, among them 1083 completed the survey, which gives a response rate of 90.25%. Among all the participants, 73.4% are male. There were 600 participants from Anhui, 300 from Sichuan, and 183 from Henan Province.

6.2.2 Measurement

Endogenous variables

Three endogenous variables were included in this study: self-rated health, hopefulness toward future retirement, and retirement planning. For self-rated health, respondents were asked “how do you rate your health status at present?” Having good self-rated health was coded as 1; poor (=0) was the reference category. Hopefulness toward future retirement was used as a continuous variable where respondents were asked “please rate 1-4 about how you feel about your upcoming retirement,” with “1” representing the lowest of hopefulness and “4” representing the highest. For the respondents’ retirement planning, they were asked whether they had made any arrangements for retirement, including private savings and retirement housing. Answers of “yes” were coded as “1,” with those of “no” as the reference category.

Exogenous variables

Exogenous variables include employment experience as migrant workers, financial status, and social support. Migration employment experience was measured by length of work experience and work-related adverse experiences. Length of work experience was coded into 5

years or below (=1), 6 to 9 years (=2), and 10 years and above (=3). Having work-related adverse experience was coded as “1”, with no (=0) as the reference category.

Financial status was measured by monthly income and self-perceived financial status. For monthly income, respondents were asked “what is your monthly income at present? If currently not working, what was your monthly income for your most recent job?” Based on China’s urban average pay standard, below 3000 RMB per month (\$425 or below) was coded as low income, 3001-5000 RMB (\$425 to \$714) was coded as medium income, and 5000 RMB/\$714 or above was coded as high income. For self-perceived financial status, respondents were asked “how do you rate your current financial condition?” Good self-perceived financial status was coded as 1, with poor (=0) as the reference category.

Social support was measured by any social support received from the outside of work setting and within the work setting. For social support received from the outside of work setting, three independent questions were asked: “how much support do you receive from your families/friends/neighbors when you are in need, respectively?”. Responses ranged from 1 to 4, with 1 representing the lowest level and 4 representing the highest level. An index of the composite was created based on the three responses. Cronbach’s alpha of this composite scale was at .636. Social support within the work setting was measured by actual support that participants had received from the employer. “Yes” was coded as 1, with no (=0) as the reference category.

Socio-demographic variables

Four socio-demographic variables were used in the statistical analysis as control variables. Age was measured in chronological years. Gender was coded as male (=1), with

female (=0) as the reference category. Educational attainment was coded into elementary school or below, middle school, and high school and above.

6.2.3 Statistical Analysis

In this study, path analysis was conducted, as it was the most appropriate statistical method to examine the structural relationships between migrant worker's financial status, employment experience, social support, self-rated health, hopefulness toward future retirement, and retirement planning after controlling for basic demographic variables. Path analysis was conducted using Mplus version 8. Data preparation was conducted using SPSS version 25, with the aim of properly coding variables into a reasonable format and checking for the issues of non-normality. When conducting the path analysis in Mplus, multi-normality was not assumed, since most variables in use are categorical variables. Full information maximum likelihood (FIML) was requested as the estimator, so that Mplus gives both log-odds coefficients and odds ratios for interpretation.

6.3 Results

In the following section, I'll first introduce the descriptive statistics and the bivariate analysis, followed by the path model results.

6.3.1 Descriptive Statistics

A total of 1083 respondents were included in this study. Table 5 shows the descriptive statistics for each variable. Among all the respondents, only 26.5% reported having some retirement planning (private retirement funds or housing), approximately half (49%) have rated their health status as good. The average score for hopefulness toward future retirement was 2.7, on a 4-point scale with a standard deviation of 1.0. The majority of respondents were male (73.4%). The average age was 52.4, with a standard deviation of 6.8. Nearly half (48.3%) of the

respondents have completed middle school, only 14.4% have a high school diploma or college degree, and over a third (37.3%) have an elementary school certificate or below.

Over half (55.9%) of the respondents had at least 10 years of working experience as a migrant worker. Nearly one in four (23.7%) had adverse experiences at work. Nearly half (45.3%) of the respondents reported that they made low monthly income, followed by 35.5% who make medium income, and 19.1% who make high income. Based on their monthly income and private savings, one in five (26.4%) have reported good self-perceived financial status. The average score for the social support index was 2.1, with a standard deviation of 0.6 on a scale of 1-4, with 4 representing the highest level of support received.

Table 5. Descriptive Statistics for All Variables

	%(N)	M(SD)
<i>Retirement Planning</i>		
Yes	26.5% (287)	
No	73.5% (796)	
<i>Self-rated Health</i>		
Good	49.0% (521)	
Poor	51.0% (552)	
<i>Hopefulness toward Future Retirement^a</i>		2.7 (1.0)
<i>Years of working</i>		
5 years or below	24.2% (256)	
6 to 9 years	20.9% (222)	
10 years and above	54.9% (583)	
<i>Adverse Experience at Work</i>		
Yes	23.7% (257)	
No	76.3% (826)	
<i>Monthly Income</i>		
3000 or below	43.7% (460)	
3001 to 5000	36.6% (385)	
5000 and above	19.7% (207)	
<i>Self-perceived Financial Status</i>		
Good	27.6% (286)	
Poor	72.4% (750)	
<i>Social support^b</i>		2.1 (0.6)
<i>Age^c</i>		52.4 (6.8)
<i>Gender</i>		

Male	72.4% (753)
Female	27.6% (287)
<i>Education</i>	
Elementary school or below	37.3% (404)
Middle school	48.3% (523)
High school or above	14.4% (156)
Notes. N= 1083. ^a Range= 1.0-4.0. ^b Range= 1.0-3.0. ^c Range= 45-77.	

6.3.2 *Bivariate Analysis*

Table 6 shows the bivariate correlation among all the endogenous, exogenous and control variables. Except for self-rated health, adversity experience at work, age, and gender, all variables in use were significantly related to retirement preparedness. All exogenous variables were significantly correlated with self-rated health, except gender and social support received from outside of work setting. Significant relationships were also found between respondent's hopefulness toward future retirement and majority of exogenous variables, except for years of working experience and social support. Weak to moderate significant correlations were found across all exogenous variables, which suggests the necessity of not constraining to equal in the following path model.

Table 6. Correlation Matrix for the Endogenous, Exogenous, and Control Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Retirement Planning	1											
Self-rated Health	.05	1										
Hopefulness	.22**	.21**	1									
Years of Working	.08*	-.13**	-.01	1								
Adversity Experience	-.04	-.11**	-.08*	.01	1							
Monthly Income	.16**	.17**	.15**	.19**	.07*	1						
Self-perceived Financial Support	.15**	.09**	.17**	.04	-.01	.22**	1					
Social Support From Inside of Work	.25**	.09**	.19**	.03	-.09**	.14**	.17**	1				
Social Support From Outside of Work	.09*	.06	.03	.04	-.02	.05	-.05	.12**	1			
Age	.01	-.09**	.05	-.01	-.04	-.14**	-.12**	.02	-.01	1		
Male	-.04	.04	-.04	.13**	.10**	.09**	-.04	.01	.12**	.06*	1	
Education	.08*	.12**	.09**	.03	.01	.16**	.11**	.04	-.09**	-.13**	-.13**	1

Notes. N= 1083. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

6.3.3 *Path Model Results*

To test the proposed conceptual models presented in Figure 2, an initial path model was estimated. Based on several global statistics for model fit, the proposed conceptual model adequately represents the data. The Bentler's (1990) normed Comparative Fit Index (CFI) for this model is .945, which is sufficiently greater than the recommended cut-off point of .90. The Root Mean Squared Error of Approximation (RMSEA) is .048, which is less than the recommended cut-off point of .05 (Browne & Cudeck, 1992). Finally, the Standardized Root Mean Square Residual (SRMR) is .015, which is also less than the recommended cut-off point of .05 (Kelloway, 1998). However, the preliminary results indicated that some pathways were not statistically significant, and thus a trimmed model with all non-significant pathways removed was also estimated. Based on the same set of model fit statistics, the trimmed model also adequately fits the data (CFI=.981; RMSEA=.023; SRMR=.011).

As stated earlier, the main goal of this study was to identify the linking mechanisms between Chinese migrant worker's various types of migration experience and retirement planning for the future. Both direct and indirect effects of various variables in relation to retirement planning were observed. Figure 3 and Table 7 present the complete path model and the associated standardized estimates. The results indicated that income not only directly ($\beta=.094$, $p<.01$) affected respondents' retirement planning, but also indirectly affects it through self-rated health ($\beta=.149$, $p<.000$) and hopefulness toward future retirement ($\beta=.084$, $p<.01$). Both direct ($\beta=.072$, $p<.05$) and indirect effects through hopefulness toward future retirement ($\beta=.107$, $p<.01$) were found between self-perceived financial status and retirement planning. The results further showed that both social support received by migrant workers from outside ($\beta=.078$, $p<.05$) and inside ($\beta=.180$, $p<.000$) work settings were significant factors that directly

contributes to their retirement planning, but the indirect effect was also observed for social support received from employer on retirement planning through hopefulness toward future retirement ($\beta=.145$, $p<.000$).

As proposed in the conceptual model earlier, respondent's length of work experience ($\beta=-.072$, $p<.05$) and adverse work experience ($\beta=-.109$, $p<.01$) significantly affected their health status. Longer years of employment and having adverse work experience result in poorer health, and thus lower the level of hopefulness toward future retirement and then lead to poor retirement planning.

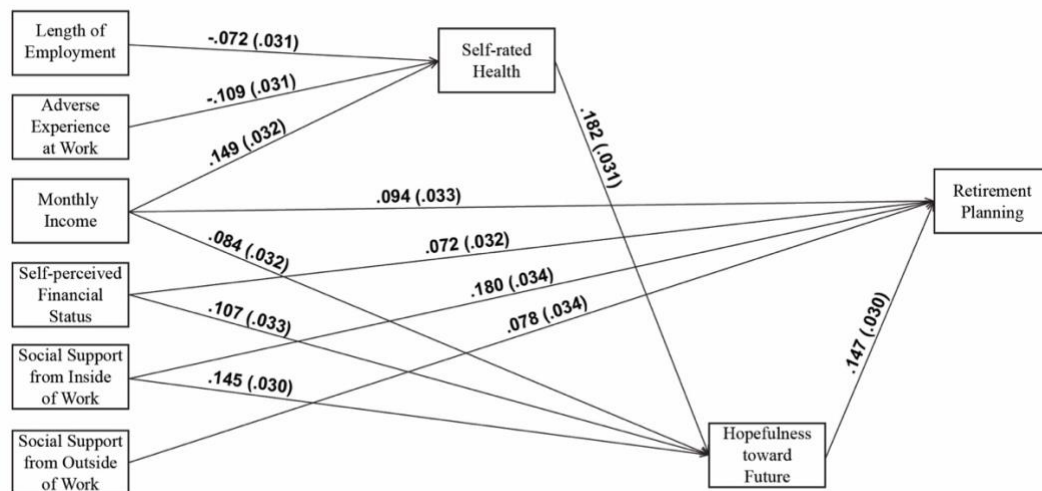


Figure 3. Path Model with Standardized Coefficients

Table 7. Decomposition of Effects for the Structural Model (Standardized coefficients)

Dependent Variable/ Independent Variable	Effects		
	Direct	Indirect	Total (Direct+ Indirect)
Self-rated Health/ Length of Work Experience	$-.072^*$	.000	$-.072^*$
Self-rated Health/ Adverse Experience at Work	$-.109^{**}$	.000	$-.109^{**}$
Self-rated Health/ Income	$.149^{***}$	.000	$.149^{***}$

Hopefulness toward Future / Social support from work	.145***	.000	.145***
Hopefulness toward Future / Income	.084**	.027**	.111**
Hopefulness toward Future / Self-perceived Financial Status	.107**	.000	.107**
Hopefulness toward Retirement / Self-rated Health	.182***	.000	.182***
Hopefulness toward Future / Length of Work Experience	.000	-.013*	-.013*
Hopefulness toward Future / Adverse Experience at Work	.000	-.020**	-.020**
Retirement Planning/ Social Support from Work	.180***	.021***	.201***
Retirement Planning / Income	.094**	.016**	.110**
Retirement Planning / Self-perceived Financial Status	.072*	.016*	.088*
Retirement Planning / Social Support from outside of Work	.078*	.000	.078*
Retirement Planning / Hopefulness toward Future	.147***	.000	.147***
Retirement Planning / Length of Work Experience	.000	-.002*	-.002*
Retirement Planning / Adverse Experience at Work	.000	-.003**	-.003**
Retirement Planning / Self-rated Health	.000	.027***	.027***

Notes. N= 1083. * $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$

6.4 Discussion

This study contributes to the existing literature by identifying the linking mechanisms between Chinese migrant workers' migration lives and their retirement planning. One major

finding was that hopefulness toward future promotes retirement planning in the Chinese migrant worker population. This is consistent with Nenkov et al.'s study (2009) addressing the important predictive role that hope has on retirement planning. Higher levels of hopefulness inspire one's motivations and thus efforts to achieve the desired goals (Nenkov et al., 2009; Ersner-Hershfield et al., 2009). For migrant workers who are underpaid and work in dangerous environments, forming a sense of security for future is rather difficult. But having hope helps identify a pathway to promote retirement planning by improving one's objective life situations.

6.4.1 Foundations of Hope—Financial Status and Retirement Planning

Financial status is the foundation for retirement planning (Feldman, 1994; Bassett et al., 1998). Good financial status not only enables migrant workers to better provide for families, but also allows them to better contribute to their public and private pension accounts, and those in turn contribute greatly to generate hopefulness. Inversely, feelings that ongoing financial stresses would continue in the future erode hopefulness (Krause & Rook, 2003). Saving funds to build rural retirement homes is an important means of increasing hopefulness for future retirement in the Chinese migrant worker population, because preexisting social networks and having farmland give them a strong sense of long-term security (Zhu & Chen, 2009). Even though Migrant workers acknowledge the importance of saving retirement funds, recent research has shown that the priority of using such funds is often given to their downward support for children's education and marriage (Qiu et al., 2020). As more rural laborers migrating to urban areas for employment, fewer adult children are available in rural China to provide upward financial and physical support to aging parents (Luo & Zhan, 2012). In the age when the culture of filial piety is lagging, migrant workers' hope of retirement, in large extent, lies in their own financial status and retirement preparedness.

6.4.2 *Social Support and Retirement Planning*

Findings in this study also highlight the important role of social support, both inside and outside of work setting, in affecting migrant worker's retirement planning. More social support received is directly associated with a higher likelihood of planning for retirement. Social network not only offers help to migrant workers when needed (Henkens, 1999; Van Dalen et al., 2010) but also serves as a major information source for their retirement preparation (Noone et al., 2009). It is particularly important to note how social support received within the work setting leads directly and indirectly to a better chance of retirement planning. Due to the facts that most migrant workers work on temporary jobs without work contracts, and employers often offer minimum pension benefits to migrant workers to cut labor costs, having a good relationship with the employer directly promotes migrant workers' retirement planning by increasing their chance of being offered pension benefits, and also indirectly by increasing their hopefulness toward future retirement.

6.4.3 *Health and Retirement Planning*

The findings of this study also lend support to the previous literature regarding the influencing role of health status on retirement planning (Feldman, 1994; Taylor & Doverspike, 2003), but the effect was indirect through hopefulness toward future retirement rather than direct. Better health status adds security and confidence for migrant workers when thinking about the future, and thus increases their hopefulness, which leads to a higher likelihood of actively planning for retirement. But it is important to note that adverse employment experiences damage migrant workers' health, and subsequently undermine such security and confidence toward future. Work-related injuries are relatively common in the migrant worker population as compared to their urban counterparts in the labor force. They bear a disproportionate burden of

work-related injury morbidity and constitute majority of work-related deaths in China each year (Fitzgerald et al., 2013). Migrant workers have limited healthcare benefits and work-related injury insurance coverage. Lack of portability in healthcare also limits their chances of seeking medical help when needed and in turn contributed to their declining health. The risk of being injured increases as their length of work experience and exposure to such risk increase (Wong et al., 2007). The existing threats from work directly contribute to migrant workers' declining health status and thus leads to a lower level of hopefulness that threatens retirement planning.

6.4.4 Policy Implication

The findings of this study point to a macro-level structural lag in the process of China's urbanization and population aging, a mismatch between challenges facing migrant workers' aging, and changes in social policies that facilitate their aging experiences (Maddox, 1996). The concept of structural lag has been widely applied to the older adult population in social science. For example, Hudson (2010) argued that service site and eligibility requirements in long-term care have created a major structural lag in the welfare program of Medicaid when older adults' needs are centered in the management of chronic diseases. While in China, even though migrant workers have worked in urban areas for decades, they are still treated as "rural residents" in terms of social benefits. These rural migrant workers, nearly 35% of China's workforce, who lack retirement pensions, and portable healthcare, become the victims of severe structural lag in the continuing social stratification systems of the rural/urban divide. Consequently, this structural lag has created a bleak future for the first cohorts of migrant workers in their approaching retirement.

Social policies that aim to establish mandatory pension participation and provide tax exemptions for retirement-savings are urgently needed. Employers should bear a tax penalty if

opting out migrant workers for defined contribution. At an individual level, pension savings should be protected from early withdrawal. A penalty for early withdrawal will make people think twice when withdrawing pension to spend on children's weddings. In addition, intervention programs that aim to (1) help migrant workers set and reach financial goals, (2) provide education and assistance for planning and implementing retirement planning are effective ways to raise awareness of old age security among migrant workers.

With the aim of understanding Chinese migrant workers' well-being after retirement, this study is among the first few that attempts to make connections between Chinese migrant workers' migration experience and retirement planning. Being one of the pioneer studies, this study has several limitations. First, the dataset is cross-sectional, thus interpretations implying causality should take caution. This paper calls for future research with longitudinal design to better address the causal relationship between migration experience and retirement planning. Second, as a pioneer study, retirement planning in this study was measured with binary responses, which has limited the opportunity to show differences between different levels of retirement planning. However, the vast majority (73.5%) of the respondents in this study have reported not having any type of retirement planning, thus, the results in this paper are insightful in understanding what obstructs the Chinese migrant workers in actively planning for retirement. Despite the limitations, this study contributes to the existing literature by disentangling the linking mechanisms between migration experiences and retirement planning among Chinese migrant workers. In the process, this study shed light on the structural and cultural lags facing migrant workers who constitute 20% of China's population.

7 CONCLUSION

This dissertation was based on both quantitative and qualitative data which provides information about Chinese migrant workers' migration experience, health status, and retirement planning. Three empirical articles were developed based on the available quantitative and qualitative data. Using mixed methods, the first article examined factors of migration experience affecting Chinese migrant worker's health and healthcare. The second article also utilized mixed methods to examine the interactions of Chinese cultural traditions of filial piety and intergenerational support, social policies, and migrant worker's retirement prospect in China. In the third article, I used path analysis to identify and map out several pathways from the Chinese migrant workers' migration experience to their retirement planning. Below, I would provide a synthesis of the major findings of the above three empirical articles in the light of theories from the macro and meso levels.

7.1 The Fundamental Cause of Poor Health and Cumulative Health Disadvantage

The fundamental cause theory argues that social institutions such as race, social class, and SES are the primary structural causes affecting human health, because such social institutions often tie closely to economic resources, power, and prestige, thus resulting in differential health outcomes (Link and Phelan, 1995). Among the Chinese migrant workers, such fundamental cause is the urban/rural stratification system. Rural residents, due to socially stratifying hukou registration systems, have limited educational resources and job opportunities. When they migrate to urban China, they do not have the same access to social benefits as their urban counterparts, these include the five insurances of education, health, injury, reproduction, retirement (Cheng et al., 2014). They end up working manual jobs that take heavier tolls and exposed them to greater risk of work-related injuries as their length of work increases. Overtime,

their rural hukou, or residential registration system, the socially constructed duality of social stratification system in China constitutes a large part of their cumulative disadvantage in health over the life course.

7.2 Living in the Crack between Urban and Rural—Insights from the Political Economy of Aging Theory

The political economy of aging theory argues that only by putting aging in the larger social context, can one comprehensively understand individual aging (Estes, 2001 p. 1). Social policy is such a structural factor that are among the most powerful ones influencing Chinese citizen's aging experiences. Chinese government's decision on promoting and accelerating urbanization has directly contributed to the emergence and development of the rural-to-urban migration started from the 1980s. Millions of rural farmers have migrated to urban areas for jobs with better pay. This migration has fundamentally changed the agriculturally based livelihood that farmland was the primary source for individuals to make livings and accumulate resources to support old age in rural China. Social policies further affect the aging experience of Chinese migrant workers by not adequately addressing their social benefits in the urban welfare system. Though working and residing in urban areas, they were not eligible for any urban social benefits including healthcare and pension. The exclusion of migrant workers in the urban social welfare system, the low pension benefit and the non-portability of their rural social benefits have eventually resulted in their current shaky ground of livelihood. —They have lived and worked in urban China for decades, but they have no urban retirement benefits; they have left the rural homes but have to return there where there are no adult children to provide the traditional filial responsibility of care. They are falling into the crack between urban and rural stratification system.

7.3 The Clash of the Culture with An Emerging Social Structural Change

Before China's first Rural Endowment Insurance system was established in 1992, the notion of retirement in rural China was weak. Rural farmers had a strong faith in raising children for old age. However, such cultural practice has been significantly challenged by China's one child policy and rural-to-urban migration since the 1980s. The one-child policy was enacted to promote the country's economic development by restricting rapid population growth. Under the one-child policy, each couple is legally allowed to have one child. Violations of the policy could result in heavy financial penalties for 5 to 14 consecutive years (Li, 1995; Li, Zhang & Zhu, 2005). Although the one-child policy is not as strictly implemented in rural as compared to urban areas, it did significantly reduce rural family size; consequently decreasing the number of adult children available for parental care (Zhan et al., 2011). Rural-to-urban migration also decreases the availability of adult children for parental care (Cong & Silverstein, 2009; Luo & Zhan, 2012). As increasing numbers of rural labors migrated to urban areas for better jobs, fewer adult children are available to fulfil filial obligations to their aging parents. Consequently, large numbers of rural elders are left behind in village homes either living alone or living in skipped-generation households with grandchildren. When migrant workers reach older age and return to their home village, they, again, have no adult children around and have to live alone and be self-sufficient due to the migration of their own adult children.

In acknowledging such challenges, some migrant workers started to save for retirement. However, for those who are able to afford to put aside a portion of their earnings in saving's account, the priority for using this fund, as shown in this study, is often used to support children's education and marriage, rather than their own old age security. By the time they start to prepare for retirement, it is highly likely that their remaining years in employment are not

sufficient to build desired old age security for them. Living in an age when traditional cultural practice clashes with an emerging social norm of financial independent in old age, this generation of hard-working migrant workers are struggling to maintain their financial well-being to afford a retirement with limited retirement savings.

7.4 Structural and Cultural Lags Affecting Health and Retirement Planning

Findings of this dissertation pointed to a macro-level structural lag in China's current processes of urbanization and population aging. Chinese migrant workers, though work and reside in urban areas, do not enjoy the urban social benefits, because their birth places are in rural areas. Most of them are either not covered by any medical or old age insurance or covered by minimal insurance programs that are not portable. China's current healthcare system encourages people to seek healthcare services at local hospitals where their hukou are registered; in return, they receive maximized healthcare cost reimbursement. However, most rural-to-urban migrant workers have migrated out of their rural hometown for better job opportunities. Therefore, when having health issues, their options are either going to doctors in urban areas where they work but paying most/all costs out of pocket or going back to rural hometown for a better healthcare cost reimbursement rate but with a potential consequence of losing jobs. For a population who work in underpaid jobs, it is clearly not realistic for them to seek for medical service in urban areas. Meanwhile, going back to rural hometown for medical treatment also seems unrealistic, because it comes with great risk of losing jobs due to the unstable and transient nature of their jobs. These multiple jeopardies have resulted in many migrant workers living in a historically disadvantageous position with poor health.

The lack of a universal pension system significantly contributes to migrant workers' disadvantageous position in their future retirement. Urban employees enjoy comprehensive

retirement pension benefits, in which both employers and employees collectively contribute to a retirement saving account, similar to 401K plan in the U.S. However, rural residents are only covered by a non-contributory low pension benefits plan (¥ 88 /\$12 per month after age 60) similar to the social assistance of Supplemental Security Income in the U.S. Other pension benefits are only available for those who are covered by the New Social Endowment Insurance program which requires an individual's contribution for at least 15 consecutive years in the rural hukou registered region. With limited trust and confidence in rural retirement system, plus continued investment in adult children's marriage and housing, this study findings have revealed, most, nearly 67% of migrant workers have not saved for their retirement. Traditionally, Chinese older adults have relied on adult children and families for old age support, however, fewer adult children are available to fulfil such filial obligations to their aging parents as increasing numbers of rural farmers migrated to urban areas for better jobs and better pay. Consequently, when aging migrant workers return to rural home, they are likely to face a multiple jeopardy resulted from their structural disadvantages, aging, poverty, and declining adult children's availability of filial piety.

7.5 Limitation of the Dissertation

This dissertation is one of the few efforts that attempts to explore the relationship between Chinese migrant workers' migration experience and their well-being into aging and retirement. As one of the pioneer studies, both qualitative and quantitative data is cross-sectional, thus interpretation of the findings implying causal relationships should take caution. To better address the influence of migration experience on health and retirement, a longitudinal dataset documenting changes at several time points may yield a better understanding of the fluid nature of health and retirement. Secondly, the data was only collected from three emigration provinces

(Anhui, Henan, and Sichuan), which might raise concerns regarding its external validity. Future research using a larger representative data may offer a better understanding toward aging and retirement in a larger population of the Chinese migrant workers. Third, due to the data availability, health and retirement measures were assessed as binary variables, which has limited the chance to see the differences between individuals with different levels of health and retirement saving. Despite the potential concerns, this dissertation contributes to the understanding of migrant workers' health, aging and retirement using both qualitative and quantitative data.

7.6 Significance of the Dissertation

This dissertation has made four important contributions to the existing literature on migration and aging studies. First, this dissertation contributes to the existing literature by making the connection between migration and aging. The first cohorts of rural-to-urban migrant workers who entered cities in the 1980s and 1990s are approaching retirement age or already at retirement age. This study is one of the first studies that aims to link migration experience with old age and retirement in rural China for migrant workers.

Secondly, study findings from this dissertation informs policy makers and social workers in the well-being among migrant workers upon reaching retirement age. In a society where migrant workers are falling between the cracks of being urban and rural, issues related to their retirement planning have raised major concerns not just for families, but for the Chinese society at large. By understanding the challenges faced by today's retiring and aging migrant workers, study findings will inform policy makers, social workers, and social programs and services needed for future migrant workers in their old age.

Third, this dissertation adds to the migration literature by putting migration in the Chinese cultural context. As rural residents migrate to urban areas, fewer adult children are available to fulfill filial obligations to their elderly parents. Thus, when the older generation of migrant workers return to home villages, after decades working in urban areas, they are likely to return to an empty nest in a rural home, living alone or living with grandchildren, due to the emigration of their own adult children. This dissertation argued that migrant workers in China are facing a clash of the long-existing cultural practice with an emerging social norm of financially independent in old age.

Finally, from the methodological approach, this dissertation adds to the existing literature by examining specific pathways denoting how migration experiences influence migrant workers' current well-being and future well-being in old age. Also, this dissertation has utilized both quantitative and qualitative data to present a full picture of migrant workers' retirement prospect in China, thus, providing a more comprehensive understanding towards the overall well-being of this hard-working generation of migrant workers.

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