Analysis of the Influencing Factors on the Willingness to Participate in Social Medical Insurance of Shanghai's Migrant Population

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Abstract: As the economic center of China, Shanghai attracts a large number of floating population every year. Based on the data of the 2018 National Mobile Population Dynamic Monitoring Survey, this paper derives the current situation of Shanghai's mobile population groups and insurance participation, and conducts a study on the data of the mobile population whose place of inflow is Shanghai to analyze which factors of individuality, employment, mobility, and social integration have a differentiated impact on the insurance participation behavior of Shanghai's mobile population. Descriptive statistical analysis and binary logistic regression analysis are used to further explore the influencing factors and to obtain the results.

Keywords: mobile population; health insurance; binary logistic regression analysis

1   Introduction

According to the Seventh National Population Census Bulletin (No. 7) - Urban and Rural Population and Mobile Population by the National Bureau of Statistics (NBS), the number of mobile population in China in the Seventh National Population Census in 2020 was 376 million. Among them, the inter-provincial floating population is 125 million, and the intra-provincial floating population is 251 million. Compared with the sixth national population census in 2010, the number of floating population increased by 154 million, with a growth rate of 69.73%. This shows that the floating population is still expanding with the development of society and can no longer be ignored[1][1]. At the same time, due to the mobile population's own characteristics, household registration system and other aspects of the impact, they are often difficult to be fully covered by social insurance, especially in the health insurance, due to the mobile population's lower human capital, mostly engaged in manual labor, and job stability is not high, so encountered in the work of the occupational risk is also greater[2][2]. Although China has made great achievements in the construction of medical insurance welfare system benefiting the whole population, and has initially formed a medical insurance system

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benefiting the whole population[3]. However, in the face of the restrictions of the household registration system of the migrant population, the migrant population is mostly included in the medical insurance system of the place of household registration[4][3].

Shanghai, as one of the major economic centers in China, attracts a large number of mobile population inflows from other provinces and cities every year[5].And the statistical results of the 2020 Shanghai Population Census Yearbook show that the size of the mobile population in Shanghai has been increasing year by year, in which the growth of the mobile population in Shanghai in 2019 was as high as 727,000 people, but at the same time, due to the fact that the overall mobile population in the inflow of the health insurance participation rate has not reached the level of comprehensive coverage, a part of the situation in the inflow place can not enjoy fair medical insurance treatment[6]. Therefore, analyzing the health insurance participation factors of Shanghai's mobile population has a certain degree of promotion effect on the comprehensive coordination of Shanghai's health insurance system[7].

2   Data and methodology

2.1   Data sources

This paper is based on the 2018 National Mobile Population Dynamic Monitoring Data, which is the data from the annual large-scale national mobile population sample survey conducted by the National Health and Health Commission since 2009[8]. The survey adopts a multi-layer, multi-stage, and PPS sampling method proportional to its size, and covers inflow areas with a high concentration of mobile populations in 31provinces (autonomous regions and municipalities) and the Xinjiang Production and Construction Corps, covering the basic information of the mobile populations and their it covers basic information on the floating population and its members, the scope and tendency of mobility, employment and social security, income and expenditure, residence, basic public health services, marriage and family planning, and so on[9][8][5]. The content covers basic information on the mobility and tendencies of the population and its members, employment and social security, income and expenditure, residence, basic public health services, marriage and family planning, and so on[10][6].

2.2   Data processing

The total sample size of the mobile population in Shanghai, the subject of the study, was screened from the national mobile population data to be 7,000 people. Then, the missing samples of key variables were screened out, and the remaining sample size was 5,849 people, and the mobile population in this data investigated a total of five types of mobile population health insurance participation, which are urban and rural residents' health insurance, new rural cooperative health insurance, urban residents' health insurance, urban workers' health insurance and public health insurance. However, due to the new policy requirements introduced one after another in China since 2017, the new rural cooperative medical insurance, urban and rural residents' medical insurance and urban residents' medical insurance are united and planned as urban and rural residents' medical insurance, so these three types of medical insurance are summarized and organized, and the sample of publicly-funded medical insurance is excluded. Finally, it is summarized that there are four types of health insurance

for Shanghai's floating population, namely, urban and rural residents' health insurance, urban and rural workers' health insurance, duplicate insurance, and all types of insurance are uninsured. The sample size of the four types of insurance participation of Shanghai's floating population is 4869 people, which is analyzed by descriptive statistics. As for the research on the analysis of the impact of the factors of the mobile population's participation in the insurance, we are only the first two cases of participation in the study.

2.3   Research methodology

In this study, we used SPSS26.0 software to conduct descriptive analysis of the current situation of the migrant population and their participation in the insurance scheme, and at the same time, we used binary logistic regression model to analyze the significant factors affecting the participation of the migrant population in Shanghai's health insurance scheme from the perspectives of individual characteristics, employment characteristics, and characteristics of mobility and social integration. Individual factors include gender, hukou status, marital status, education level and age; employment characteristics include average monthly household income, the nature of the organization and employment status; and mobility and social integration characteristics include the duration of mobility, the reason for mobility, the nature of housing and the willingness to stay.

3   Analysis of the Current Situation of Migrant Population Insurance Participation in Shanghai

3.1   Analysis of the current situation of insurance participation of Shanghai's floating population based on individual characteristics

The health insurance participation rate of Shanghai's floating population is significantly affected by individual characteristics, with the main influencing factors including gender, hukou nature, marital status, age and education level. From the statistics in Table 1, the total health insurance participation rate of Shanghai's migrant population with different individual characteristics is similar, and all of them are above 70%, and from the perspective of gender, the participation rate of Shanghai's migrant population is 77.4% for males. From the perspective of gender, the participation rate of male migrants is 77.4% and that of female migrants is 78.4%. In terms of the characteristics of the nature of the hukou, the non-agricultural hukou migrant population has a higher participation rate than the agricultural hukou migrant population, and there is a big difference between the two in the choice of the type of insurance, with the agricultural hukou migrant population preferring to participate in urban and rural residents' medical insurance, while the non-agricultural hukou migrant population prefers to participate in the urban workers' medical insurance. In terms of marital status, the higher participation rate is among the married migrant population, with a participation rate of 78.6%. From the perspective of age, the participation rate increases with age, but the types of medical insurance that Shanghai's migrant population participates in still vary by age. From the perspective of education level, the highest participation rate of 96.7% is for those with postgraduate education, while the participation rate for those with junior high school and high school education is lower. At the same time, we can see from the data that as

the education level rises, more people tend to participate in urban workers' health insurance, while the rate of urban and rural residents' health insurance drops sharply.

Table 1 Insurance participation of Shanghai's floating population based on individual characteristics

Variable	Options	Urban workers' health insurance (%)	Urban and rural residents' health insurance (%)	Total (%)
Gender	Male	34.0	43.4	77.4
	Female	40.1	38.3	78.4
Nature of Hukou	Agricultural Hukou	21.9	50.4	72.3
	Non-agricultural	64.8	23.5	88.3
Marital status	Unmarried	38.7	34.3	73.0
	Married	36.5	42.1	78.6
	Other	33.8	42.6	76.4
Age	Below 25 years	23.8	47.2	71.0
	25-34 years old	42.6	32.5	75.1
	35-44 years	43.4	36.7	80.1
	45-54 years	22.9	57.8	80.7
	55-64 years	13.3	69.4	82.7
	Over65years	5.0	80.0	85.0
Educational attainment	Never attended elementary school	4.0	75.2	79.2
	Elementary school	12.8	65.6	78.4
	Junior high school	17.1	55.0	72.1
	High school/middle school	32.5	41.3	73.8
	University college	56.9	23.3	80.2
	Undergraduate	78.9	11.2	90.1
	Graduate students	90.7	5.7	96.4

3.2 Analysis of the current situation of insurance participation of Shanghai's floating population based on employment characteristics

Differences in the employment characteristics of the health insurance participation status of Shanghai's floating population are manifested in the nature of the employment unit, employment status and average monthly household income. According to the data in Table 2, first of all, from the point of view of average monthly family income, the participation rate rises gradually with the rise of income. And as income rises, the participation rate of urban workers' health insurance rises linearly, from 17.5% to 76.7%, while the participation rate of urban and rural residents' health insurance declines. The lowest participation rate is among those with an average monthly household income of less than 5,000 yuan, and a certain percentage of financial subsidies should be added to the medical insurance costs of these groups. In terms of the nature of work, the participation rate of three-funded enterprises

(including Hong Kong, Macao and Taiwan wholly-owned enterprises, wholly-owned foreign enterprises, and Chinese-foreign joint ventures) is lower, at 66.6%. However, those with the highest rate of participation in urban workers' medical insurance are state-owned enterprises (including institutions, state-owned and state-controlled enterprises, and collective enterprises), as it is likely that state-owned enterprises and institutions and other units with better benefits can pay the highest percentage of insurance costs set by the state for their employees, thus increasing employees' willingness to participate in the insurance scheme. Although the rate of participation in unitless and other social organizations is similarly high, the vast majority of them are enrolled in urban and rural residents' health insurance. From the point of view of employment status, when employees and employers choose the type of health insurance to participate in, the status of participation in the two categories is more evenly balanced, and although self-employed workers have the highest rate of participation at 88.5 percent, the choice of the vast majority of them is urban and rural residents' health insurance.

Table 2 Insurance participation of Shanghai's floating population based on employment characteristics

Variable	Options	Urban workers' health insurance (%)	Urban and rural residents' health insurance (%)	Total (%)
Average monthly household income	Less than 5000 yuan	17.5	52.3	69.8
	5000-14999 yuan	28.3	46.2	74.5
	15000-24999 yuan	57.6	30.0	87.6
	25000-34999 Yuan	69.3	19.7	89.0
	35000-44999 yuan	67.8	17.8	85.6
	45000-54999 Yuan	76.7	11.6	88.3
	Not less than 55000 yuan	66.6	16.6	83.2
Nature of work	Private enterprises	34.4	43.3	77.7
	Three-funded enterprises	54.2	11.8	66.0
	State-owned enterprises	58.9	22.9	81.8
	Unorganized and others	3.8	86.5	90.3
Employment status	Employee	43.0	32.0	75.0
	Employer	38.3	44.4	82.7
	Self-employed workers	6.6	81.9	88.5
	Other	70.8	4.1	74.9

3.3 Analysis of the current situation of insurance participation of Shanghai's floating population based on their mobility and social integration characteristics

The current situation of insurance participation of Shanghai's floating population based on the characteristics of mobility and social integration is analyzed from four perspectives. According to the data in Table 3, firstly, from the perspective of time of mobility, the longer the time of inflow to Shanghai, the higher the participation rate of Shanghai's floating population, which rises from 76.1% to 87.4%. From the perspective of the reason for mobility, the highest participation rate is among those who flowed into Shanghai due to marriage, with a participation rate of 88.3%, followed by those who did business in Shanghai, and although the largest number of people flowed into Shanghai due to labor and work, the participation rate is not satisfactory, indicating that there are still many workers who do not take part in the insurance. From the perspective of the nature of housing, the highest participation rate is among those who own their own homes, with a participation rate of 87.9%, indicating that compared to those who rent their own homes or flats, they do not have the pressure of mortgage payments and rent, and have a stronger willingness to participate in the basic social health insurance program. Finally, from the perspective of willingness to stay in the future, most of them are willing to stay in Shanghai in the future, and the participation rate of this group of people is also the highest, with a participation rate of 78.4%.

Table 3 Insurance participation of Shanghai's floating population based on characteristics of mobility and social integration

Variable	Option	Urban workers' health insurance (%)	Urban and rural residents' health insurance (%)	Total (%)
Mobility time	Not more than 10 years	35.1	41.0	76.1
	11-20 years	41.5	38.4	79.9
	21-30 years	29.5	53.5	83
	31-40 years	41.6	45.8	87.4
	More than 40 years	50.0	0	50.0
Reason for mobility	Birth	58.3	25.0	83.3
	Work	38.8	37.6	76.4
	Marriage	63.9	24.4	88.3
	Family members moving	32.9	42.3	75.2
	Relocating to friends and relatives	52.6	31.5	81.4
	Moving	78.5	7.1	85.6
	Taking care of their own children	16.6	62.5	79.1
	Doing business	16.7	70.5	87.2
	Others	21.4	64.2	85.6
Nature of housing	Rented	23.0	51.7	74.7
	Flat	31.6	32.2	63.8
	Owned	69.4	18.5	87.9
	Other	33.8	45.3	79.1

Willingness to stay	Yes	38.5	39.9	78.4
	No	15.6	45.8	61.4
	No idea	20.3	53.7	74.0

4 Analysis of the influencing factors of Shanghai migrant population's health insurance participation

According to Table 4,a binary logistic regression analysis was conducted to examine the factors that may affect the insurance participation of Shanghai's migrant population, with "whether to participate in basic health insurance" as the dependent variable, and gender, age, education level, nature of household, marital status, average monthly gross income, nature of the organization, employment status, nature of housing, duration of mobility, reason for mobility, and willingness to stay as the independent variables. According to the logistic analysis results in Table 4, firstly, from the perspective of individual factors, gender has no significant impact on the participation rate, and the participation rates of males and females are similar; The older they are, the more they value their health and the higher their participation rate;from the nature of the hukou, the participation rate of non-agricultural hukou can be seen that the participation rate of non-agricultural hukou is higher, and the participation rate of non-agricultural hukou is lower. From the nature of the hukou, it can be seen that the participation rate of non-agricultural hukou is higher than that of agricultural hukou, and the participation rate of married migrants is higher than that of unmarried ones. Finally, from the viewpoint of education level, the higher the education level is, the higher the participation rate will also increase. Secondly, from the analysis of employment factors, it is concluded that the better the welfare benefits and the higher the salary of the enterprise, the higher the participation rate will be; from the employment status, it can be seen that the participation rate of the employees is significantly higher than that of the employers and other status holders. At the same time, wages also have a clear impact on the participation rate, with higher wages increasing the participation rate. Thirdly, from the perspective of mobility and social integration factors, the longer the duration of mobility, the higher the participation rate of Shanghai's floating population; the highest participation rate is found among those who migrate to Shanghai for reasons of working and doing business; the participation rate of those who own their own homes is higher, as the financial pressure is slightly less than that of those who rent; and the participation rate of those who have the intention to reside in the city in the future is also the highest.

Table 4 Binary logistic regression scores of factors influencing the willingness of Shanghai's migrant population to participate in insurance.

Variable		B	Significance	Exp(B)
Gender	Male (reference group)			
	Female	0.352	0.004	0.993
Nature of Hukou	Agricultural Hukou (reference group) 〉			
	Non-agricultural Hukou	0.155	0.022	1.167
Marital status	Unmarried (reference group)			
	Married	0.059	0.000	2.062

	Other	0.104	0.797	0.902
Age	Below 25 (reference group)			
	25-34 years old	0.697	0.002	2.008
	35-44 years old	0.799	0.000	2.223
	45-54 years old	0.782	0.001	2.286
	55-64 years old	0.346	0.294	2.414
	Over 65	0.450	0.009	2.860
Educational attainment	No primary schooling (reference group)			
	Elementary school	0.364	0.032	1,440
	Junior high school	0.375	0.026	1.456
	High school/secondary school	0.478	0.017	1.612
	University college	0.679	0.006	1.972
	Undergraduate	1.284	0.001	3.611
	Postgraduate	1.535	0.011	4.641
Average monthly household income	Less than 5,000 yuan (control group)			
	5000-14999 Yuan	0.454	0.010	1.575
	15000-24999 yuan	0.546	0.000	1.725
	25000-34999 Yuan	0.796	0.002	2.218
	35000-44999 yuan	1.002	0.038	2.226
	45000-54999 yuan	1.413	0.033	2.769
	Not less than 55000 yuan	1.036	0.000	2.932
Nature of work	Private enterprises (control group)			
	Three-funded enterprises	1.009	0.000	2.743
	State-owned enterprises	1.380	0.000	3.974
	No organization and others	0.219	0.263	1.245
Employment status	Employee (control group)			
	Employers	0.238	0.020	0.788
	self-employed workers	0.224	0.013	0.799
	Other	1.351	0.008	0.259
Duration of mobility	Not more than 10 years (control group)			
	11-20 years	1.138	0.003	1.148
	21-30 years	1.272	0.000	1.312
	31-40 years	1.871	0.004	1.334
	More than 40 years	2.493	0.078	1.210
Reason for mobility	Work for business (control group)			
	Family reasons	-0.189	0.000	0.828
	Birth and others	-0.174	0.014	0.840
Nature of housing	Rented (control group)			
	Owned	0.578	0.000	1.783
	Flat	0.411	0.004	1.508
	Other	0.375	0.221	1.455
Willingness to stay	Yes (control group)			
	No	-1.116	0.000	0.327
	Not sure	-0.479	0.017	0.619

5   Conclusion and recommendation

According to the results of this paper, it is known that the health insurance participation rate of Shanghai's floating population is 94%, which has not yet realized the full coverage of health insurance, and the vast majority of people still choose to participate in urban and rural residents in the place of registration, when studying the factors influencing the willingness to participate in Shanghai's health insurance, it is found that the individual factors, employment factors, mobility and social factors have a significant impact, and there is a big difference between the urban workers' health insurance and the urban and rural residents' health insurance. There is also a big difference between urban workers' health insurance and urban and rural residents' health insurance[8].

Based on the research in this paper, the following suggestions are made: firstly, it is still necessary to increase the publicity of the policy related to health insurance for the migrant population, and try to make all migrant populations realize the importance of participating in the insurance. Second, improve the articulation and continuity system of medical insurance, and improve the relevant policy system, so that migrant workers from other countries flowing into Shanghai can apply for local medical insurance with fewer thresholds, which is more conducive to increasing the participation rate of Shanghai's migrant population in the local insurance. Finally, increase the supervision of the relevant departments, so that all the labor force migrant population in employment must enjoy the right.

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