

## Article

# Belief in Religion or Participation in Insurance? The Impact of Religious Beliefs on the Decision to Participate in Social Health Insurance in China

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**Abstract:** Investigating the factors that influence individual decisions to participate in social health insurance is an essential component of constructing a multi-tiered, comprehensive social health insurance system, and religious beliefs may constitute an important potential factor. Utilising data from the China General Social Survey (CGSS), this study has developed a comprehensive explanatory framework encompassing both macro- and micro-level analyses to ascertain the impact of religious beliefs on individual decisions to participate in social health insurance through quantitative methods. The findings indicate that religious beliefs significantly diminish the likelihood of individuals participating in social health insurance, and the influence varies among different types of religions; endogeneity and robustness tests offer robust support for these conclusions. With respect to heterogeneity, the influence of religious beliefs on the decision to participate in social health insurance exhibits differentiation across dimensions such as educational attainment, social trust levels, income levels, and self-rated health statuses. Furthermore, the social interaction effect and the employment opportunity effect are identified as potential mechanisms driving this influence.

**Keywords:** religious belief; behaviour of believers; health insurance; social welfare; Chinese religions



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## 1. Introduction

In modern society, the risk of illness is one of the major economic and health threats to individual workers and their families, and social health insurance is an important social security measure to counter this threat. In some Western countries, in addition to the state, religious groups have been able to participate significantly in the provision of social welfare and health care services through a wide network of social services. In China, on the other hand, this function is mainly provided by the social security system of the state government. The relationship between religion and social security is a universal social phenomenon, despite differences in religious beliefs, social security systems, and cultural backgrounds in different countries and regions. China's social medical insurance system is one of the largest health insurance networks in the world, with the main system comprising basic health insurance for urban employees and new rural cooperative health care, and basic health insurance for urban residents, which is mainly funded by a combination of government subsidies and individual contributions, covering the basic health care needs of the insured. Nevertheless, there are still urban–rural and inter-regional disparities in the coverage and quality of services, depending on the levels of regional economic development, the distribution of health care resources, and the degree of financial costs covered by the participants. China's social health insurance has continued to promote coverage expansion and supply structure adjustments in recent years, and, by the end of 2022, the number of basic health insurance participants nationwide had reached 134,592,000, with the participation rate having stabilised at over 95%<sup>1</sup>. However, in comparison to 2021, the number of insured individuals decreased by 17.05 million in 2022. Possible reasons for this are, on the one hand, that, until a unified national health insurance information

platform becomes operational in China in 2022, provincial health insurance systems remain separate, with a lack of information sharing and the duplicate enrolment of residents in multiple provinces, which may cause problems for both the government and individuals in terms of health insurance fund utilisation and the sustainability of the health insurance system. Following the interconnection of national health insurance data, the statistical quality of participation data has been standardised, which has facilitated the management of invalid data from duplicate participation, leading to a sharp drop in the number of participants at the data level<sup>2</sup>. On the other hand, the structural alteration of society and the cultural changes in consciousness have somewhat shaped the social behaviour decisions of individuals. In the context of economic transformation, consumption changes, and the COVID-19 epidemic, residents may tend to make rational choices relating to material protection in household asset allocation and household risk taking, which would be limited to declining income expectations and future confidence. Meanwhile, in the chasm of asynchronicity between economic development and social change, there is a risk of moral misconduct and hollow faith (Lin 2017), and people may have a spiritual need for psychological comfort and support (Xia 2023). According to the available official data, in 2018, the number of religious citizens in China reached 200 million<sup>3</sup>. It is worth noting that a significant proportion of these individuals attribute their religious beliefs to illness (Jiang et al. 2011; Zhou and Sun 2017).

For individuals who have existing or potential health risks, the social health insurance system and religious belief system have different decision-making bases and functional values. Firstly, under the rational decision-making framework of cost–benefit, individuals may face a binary decision between social health insurance and devotional beliefs due to the limited reserves of wealth resources. Social health insurance has a material payment attribute, while devotional beliefs just require a spiritual willingness to pay. Secondly, along with the epochal transformation of social structure and social relations, traditional interpersonal relations and modes of interaction are gradually changing. The portrayal of positive spirituality and the causal explanation of risky situations in religious content offer a path to spiritual relief from the pressures of modern society and the dilution of human emotions in the ‘society of strangers’ experienced by individuals in the real world. The doctrinal content of religions and the sense of community within groups can provide individuals with spiritual support in the face of risk (Zhou 2022). The factors mentioned above make people with religious beliefs feel less obliged to participate in social health insurance. Finally, as the level of informatisation has increased, Chinese residents have achieved more convenient digital services in terms of access to social health insurance information, insurance registration, payment methods, and access to medical services, but the problem of the digital divide still exists for disadvantaged groups with a digital dividend, such as the elderly and people with disabilities. Simultaneously, with the economic level improvement and the expansion of the scope of medical protection, the cost of participation in social health insurance has increased significantly (see note 2), and, despite the increase in the coverage and quality of protection, it still represents a greater financial burden for individuals and families with lower incomes. Some of the marginalised groups mentioned above may feel systematically excluded due to the contribution threshold, digital transformation, and access to information. Such groups may seek the protection of more accessible religious forces or regard their illness as part of their religious destiny, potentially abandoning the secular security system. Accordingly, it is important to consider whether the social health insurance system and religious beliefs have parallel or substitutive effects in terms of material and spiritual relief and provision. This could be a crucial factor in relation to the quality of service and the real value of China’s social security system. This paper investigates the impact of religious beliefs on individuals’ decision making regarding social health insurance. The study combines macro and micro data to explore and analyse the potential mechanisms of this impact from the perspective of individuals’ spiritual feelings and rational choices.

## 2. Theoretical Background

Social health insurance can enhance individuals' healthy human capital and health (Hackmann et al. 2012; Wang and Zheng 2014), and it is an important social security for safeguarding individuals' health risks and protecting social equity. Religious beliefs are also closely related to individual health; on the one hand, religious beliefs have a promotional effect on mental health (Bonelli and Koenig 2013; Walters and Benjamins 2022); on the other hand, religious beliefs may have a social security function, or even have a substitution effect with the social security system (Scheve and Stasavage 2006; Ruan and Liu 2011). Individuals who have religious beliefs have intrinsic and extrinsic motivations to abandon the social security system when faced with health and disease risks. From an institutional perspective, it takes time and resources to build and implement a social and medical security system that can cover all levels of society in a comprehensive and flexible manner, especially in the context of rapid social transformation and the urban–rural divide. Individuals or families with risky dispositions may turn to religion for spiritual support in the absence of adequate social security provisions (Zheng et al. 2010; Zhang 2020). Simultaneously, the social security system's potential rejection of marginalised groups (Lin 2017) and its possible lack of material support (Ferrara and Testa 2023) may motivate them to seek 'distant rewards' through religious beliefs (Stark and Finke 2000). From a functional perspective, at the macro level, religious belief has a social maintenance function in terms of political rule, social stability, and social harmony (Jianjun Liu 2023). At the micro level, in addition to the value function, individuals who believe in religion may seek instrumental value in terms of information interaction, income enhancement, and social security (Yue and Ye 2012). Accordingly, the research Hypothesis 1 of this paper is proposed as follows:

**Hypothesis 1.** *Individuals' religious beliefs can impact their participation in social health insurance.*

Chinese society is characterised by a pro-relationship attitude, and the frequency of social interaction has a significant impact on individual social behaviour (Xiang et al. 2020). Social interaction is an external feature of religious activities, and religious belief accumulates social capital for individuals and groups through the organisational effect of enhanced social interaction, enhances the degree of trust within the group (Miao et al. 2021), raises the positive emotional value of believers for the social security function of the religious belief system, and increases the value game of the belief group through the belief effect to make social behavioural decisions in line with the group's value norms (Ruan and Liu 2011; Yeary et al. 2012). In China's ideological system, religious groups make up a relatively small proportion of the population, and those who believe in religion may have certain differences from the mainstream group in terms of lifestyle, cultural background, values, etc., so there is a certain tension surrounding group compartmentalisation (Ruan et al. 2014a). Religious groups exhibit strong identity and cohesion (Fukuyama 1995), which can influence the values and embodied cognition of believers (Soliman et al. 2015). This can weaken their sense of urgency towards secular social support systems and reinforce the feeling of the correctness of their behavioural choices through consistent value and information channels (Ruan et al. 2014b). Social interaction is an important factor that influences participation rates in social health insurance. Social interaction can influence individuals' insurance behavioural decisions through endogenous and situational interactions (Durlurf 2004; Jiang and Gu 2018). Additionally, it can affect individuals' perceptions and choices regarding insurance needs by reducing the cost of access to health insurance information (Manski 2000; Liu and Wu 2019). The paper proposes research Hypothesis 2, as outlined below.

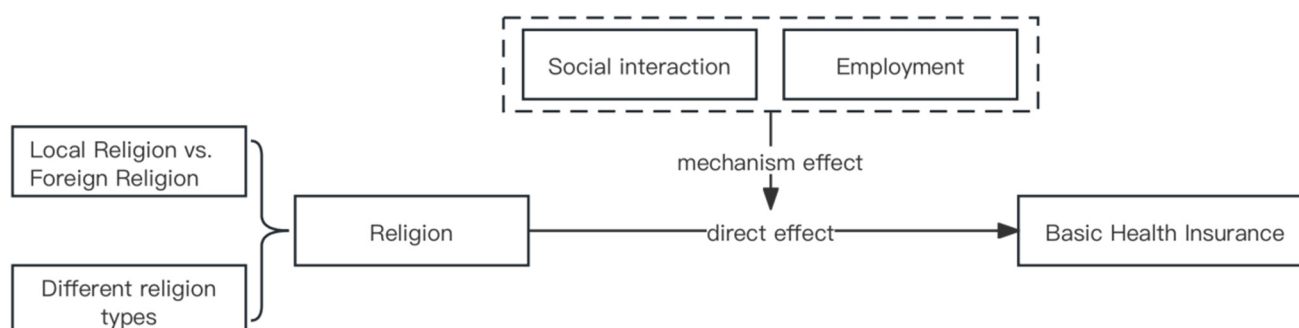
**Hypothesis 2.** *Social interaction is a potential mechanism through which religious beliefs influence individual participation decisions in social health insurance.*

Social health insurance participation is inherently employment-based and mandatory (Junqiang Liu 2010; Shi and Zhu 2022), so China's 'urban occupational insurance' coverage

rate is at a high level under the constraints of legal protection and moral responsibility. In recent years, the development of the digital economy has generated new-type workers. However, the ambiguity of the labour relationship and the lack of protection systems have resulted in the emergence of uninsured flexible employees (Guan and Zhu 2018). Empirical studies have shown that the participation rate of stable and formal workers in social health insurance is higher than that of other workers (Muttaqien et al. 2021; Mao and Li 2022). The employment effect is an important variable among the factors influencing participation in social health insurance. Hafedh and Xu (2021) found a potential influential relationship between religiosity and employment. Specifically, managers' religiosity was found to have a positive impact on workers' employment protection. In the economic field, religious beliefs can have some influence on individuals' production and consumption behaviour (Nunziata and Rocco 2011) and can even affect employment intentions (Perez-Villadoniga et al. 2014). Meanwhile, there may also be discriminatory effects on employment opportunities and incomes for workers with religious beliefs in the workplace (Tao et al. 2017; Di Stasio and Vries 2023). Accordingly, research Hypothesis 3 of this paper is proposed.

**Hypothesis 3.** *Employment opportunities are a potential mechanism through which religious beliefs influence individual participation decisions in social health insurance.*

Therefore, this paper investigates the factors that may impact Chinese individuals' decisions to participate in social health insurance while taking into account religious beliefs and explores individuals' value judgments and rational choices in risk perception and decision support. Based on previous studies, this research explores the potential mechanisms by which religious beliefs influence individuals' participation decisions in social health insurance, using social interaction and employment opportunities as intrinsic and extrinsic motivational analyses, and conducting in-depth explorations and empirical tests based on the theoretical framework displayed in Figure 1.



**Figure 1.** Theoretical hypothesis framework.

### 3. Materials and Methods

#### 3.1. Data Sources

This study utilised publicly available micro-data from the 2021 version of the Chinese General Social Survey (CGSS2021). The CGSS project initiative commenced in 2003 and is the first national, comprehensive, and continuous academic survey in China. The data covers 28 provinces/municipalities/autonomous regions, exhibiting high levels of representativeness, reliability, and breadth. Specifically, CGSS2021 is the latest version of the database, designed to include questions regarding participation in social health insurance, religious beliefs, and a range of dimensions such as socio-economic status, health, and education levels, which provide richer background information for the analyses in this paper. Since the emergence of COVID-19 in 2019, the prevalence of disease risk has escalated. However, as previously noted, the number of people participating in social health insurance has decreased. Consequently, it is particularly pertinent to leverage the 2021 data in order to investigate if religiosity is a determinant in this trend. The paper excluded data from

participants under the age of 18. After conducting data cleansing and eliminating missing values for key variables, the resultant number of valid samples stands at 7928.

### 3.2. Measures

**The dependent variable.** As mentioned above, this study focuses on social health insurance participation behaviour. According to the classification of China's social health insurance, the CGSS2021 questionnaire asked "Are you currently participating in any of the following social security programme? Urban Basic Health Insurance/New Rural Co-operative Health Insurance/Publicly funded Healthcare"; from this, we can generate binary variables between "yes" (code 1) and "no" (code 0).

**The independent variable.** For this study, the independent variable is religious belief. In CGSS2021, a binary variable was generated based on the questionnaire item "What is your religion belief?" to distinguish between respondents who held religious beliefs (code 1) and those who did not (code 0). To improve the study of the impact of religious beliefs on basic health insurance participation, we further categorised the question item options to refine the classification of native and foreign, as well as the classification of three major religions, following the methodology of [Ruan et al. \(2014b\)](#). Buddhism, Daoism, and folk beliefs are defined as native religions, and Islam, Christianity, and Catholicism are foreign religions. Buddhism, Islam, and Christianity are defined as the three major religions.

**Control variables.** To address the problem of omitted variables, the control variables for the dimensions of individual characteristics and self-rated health statuses were included based on the existing literature and data availability. The individual characteristics include gender (male = 1, female = 0), education level (highly educated = 1, no highly educated = 0), urban/rural status (urban = 1, rural = 0), whether they have children (have children = 1, not have children = 0), and ethnicity (Han = 1, others = 0); the self-rated health status includes physical health (1~5, the higher number, the more physical healthy) and mental health (1~5, the higher number, the more mental healthy).

**Mechanism variables.** To enhance the comprehension of the pathways through which religious belief may affect participation in social health insurance, this paper considers two mechanism variables as follows: the social interaction effect and the employment opportunity effect. Regarding the social interaction effect, the questionnaire item "In the past year, did you often do the following in your free time? -Socialize" identified the following ordered categorical variables: "never", "rarely", "sometimes", "often", "always", coded as 1 to 5, respectively. The employment opportunity effect used the question "What is your current employment status?" and identified "working" (code 1) and "not working" (code 0) as binary categorical variables. Table 1 presents the results of the descriptive statistical analysis of the main variables.

**Table 1.** Descriptive statistical results.

Variables	Mean	SD	Min	Max	Obs
Dependent Var					
Social health insurance	0.945	0.229	0.0	1.0	7928
Independent Var					
Religious belief	0.074	0.262	0.0	1.0	7928
Controls					
Gender	0.451	0.498	0.0	1.0	7928
Education	0.206	0.405	0.0	1.0	7928
Urban–rural	0.306	0.461	0.0	1.0	7928
Children	0.844	0.363	0.0	1.0	7928
Ethnicity	0.927	0.260	0.0	1.0	7928
Physical health	3.484	1.092	1.0	5.0	7928
Mental health	3.942	1.083	1.0	5.0	7928
Mechanism Var					
Social interaction	2.641	1.124	1.0	5.0	7928
Employment opportunity	0.507	0.500	0.0	1.0	7928



### 3.3. Methods

To demonstrate the impact of religious beliefs on participation in social health insurance, this study followed a four-step analysis process that gradually delved deeper. Firstly, we used a probit model as a baseline regression model. Secondly, to address endogeneity issues and test the robustness of the estimation results, this study uses four methods as follows: the instrumental variable method, model replacement, dependent variable replacement, and independent variable replacement. Thirdly, we examined the heterogeneity in the relationship between religious belief and participation in social health insurance. Finally, the study examined the impact mechanism of religious beliefs and social health insurance participation by assessing the independent variable against two mechanism variables separately.

## 4. Results

### 4.1. Probit Regression

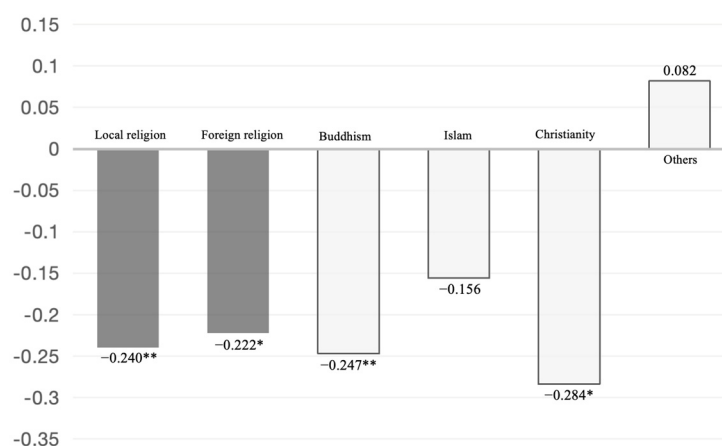
The probit regression results based on the empirical strategy are shown in Table 2. First, the regression analysis was initially conducted without control variables. The estimation results are presented in Table 2, Column (1). The crowding-out effect of religious beliefs on social health insurance participation is significant at the 1% level. Second, the control variables of individual characteristics and self-rated health status dimensions are successively included, and the estimation results are shown in Table 2, Columns (2) and (3). The crowding-out effect of religious beliefs on social health insurance participation is significant at the 5% level, and the estimated coefficient stabilises around  $-0.18$ . Hypothesis 1 is provisionally confirmed. Specifically, the probability of participation in social health insurance will be reduced by 18% for every standard deviation increase in an individual's religious beliefs. It shows that, in the process of improving the social security system and raising the social health insurance coverage rate, the government should not only pay attention to the hard power paths of social security, such as financial input and system construction, but also pay attention to the objective cognitive ability of residents and the front prevention paths of individual risks, reasonably guiding the value orientation of religious beliefs to raise the level of the rational cognition of social health insurance.

**Table 2.** Probit regression results.

	Dependent Variable: BHI		
	(1)	(2)	(3)
Religion	−0.218 *** (−2.77)	−0.184 ** (−2.16)	−0.180 ** (−2.11)
Gender		0.106 ** (2.20)	0.100 ** (2.07)
Edu		0.296 *** (4.03)	0.297 *** (4.02)
Urban–rural		0.148 *** (2.58)	0.144 ** (2.51)
Child		0.275 *** (3.85)	0.273 *** (3.78)
Nationality		0.004 (0.04)	0.003 (0.03)
Body health status			−0.011 (−0.43)
Mental health status			0.033 (1.42)
Region dummy	No	Yes	Yes
Cons	1.614 *** (66.77)	1.324 *** (5.40)	1.244 *** (4.74)
N	7928	7928	7928
Pseudo R <sup>2</sup>	0.0022	0.0306	0.0306

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ .

To examine the correlation between religious beliefs and participation in social health insurance, regressions were conducted on both native and foreign religions, as well as the three main religions. The results of the estimations are presented in Figure 2. The left two bars in Figure 2 show the results of the differentiation of the effects of native and foreign religions on social health insurance participation, and it can be seen that the significance level and estimated coefficients of native religions are stronger than those of foreign religions, which may be due to the fact that native religions are more socio-culturally adapted (Guo and Wang 2017) and more likely to influence individuals' cognitive judgments and behavioural choices. The right four bars in Figure 2 show the differences in the effects of Buddhism, Islam, Christianity, and other religious beliefs on social health insurance participation, respectively. The impact of Buddhism and Christianity on social health insurance participation is more significant, with the estimated coefficients being higher than in the baseline regressions; the estimated coefficient of the impact of Islam is lower and non-significant, and belief in other religions is non-significant, with estimated coefficients being located in the opposite direction to the baseline regression. Different religious beliefs have varying cultural backgrounds, doctrinal contents, and support systems. The choice to participate in social health insurance depends on the degree of the fit between an individual's perceived willingness to take health risks and the path of prevention, as well as the religious and cultural kernel of their beliefs. This leads to heterogeneity in social health insurance participation among groups with different religious beliefs.



**Figure 2.** The coefficient and significance of different religion types (Note: \*\*  $p < 0.005$ , \*  $p < 0.1$ ).

#### 4.2. Robustness and Endogeneity Tests

To assess the robustness of the estimation results and address potential endogeneity, this research uses four methods as follows: model replacement, dependent variable replacement, independent variable replacement, and the instrumental variable method. The specific results are presented in Table 3. Firstly, as the dependent variable is a binary categorical variable, the logit model replaces the probit model in the baseline regression. The results are presented in Column (1) of Table 3. It is evident that the replacement model's significance remains unchanged, and the coefficient has slightly increased. Secondly, since China's health insurance system encompasses both social and commercial health insurance, the questionnaire combines questions relating to both. The dependent variable to be replaced is "whether to participate in health insurance", which has a broader definition. The results are presented in Column (2) of Table 3. The data indicate that the dependent variables' significance remained unchanged after the replacement, and the estimation results are somewhat robust. Thirdly, to prevent potential endogeneity between the independent variables and other control variables, the independent variables are replaced by the question "frequency of participation in religious activities", taking into account the elasticity of the propensity to believe in participation in religious activities (Zheng et al. 2010), and the results are shown in Column (3) of Table 3. The results indicate that there

is no significant change in the significance, and the estimation results are robust, further validating Hypothesis 1.

Finally, to address the potential endogeneity issue, in conjunction with religious market theory (Stark and Finke 2000), the density of religious sites is found to have a facilitating effect on religiosity behaviour, but it does not directly affect individual health insurance participation behaviour. According to Ruan et al.'s (2014b) study, religious belief was measured using the density of religious sites as an instrumental variable. The results of the two-stage estimation are presented in Column (4) of Table 3, after the instrumental variable passed the reasonableness test. The significance of the estimation results increased, further supporting Hypothesis 1.

**Table 3.** Robustness and endogeneity test results.

	(1)	(2)	(3)	(4)	
	BHI	HI	BHI	Religion	BHI
Religion	−0.359 ** (−2.11)	−0.182 ** (−2.03)			−2.826 *** (−3.49)
Religious activity			−0.043 ** (−2.00)		
Religious density				0.001 *** (9.66)	
Control variable	Yes	Yes	Yes	Yes	Yes
Region dummy	Yes	Yes	Yes	Yes	Yes
Cons	2.100 *** (3.75)	1.155 *** (4.34)	1.270 *** (4.81)	−0.429 *** (−3.34)	2.070 *** (7.23)
N	7928	7928	7928	7928	
Pseudo R <sup>2</sup>	0.0318	0.0341	0.0310		
Wald test P				0.0005	

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ .

#### 4.3. Heterogeneity Analysis

Table 4 presents the results of examining the insurance participation behaviour characteristics of differentiated individuals in order to better understand the impact of religious beliefs on individual social health insurance participation behaviours. The variables examined are education level, social trust, income, and self-rated health status. The results indicate the following: Religious believers without a higher education are more likely to not participate in social health insurance when compared to the highly educated group. Groups with varying levels of social trust exhibit heterogeneity in their choices regarding social health insurance participation. Low-income religious believers are more likely to not participate in social health insurance than high-income groups. Religious believers with better self-rated health are more likely to ignore or forgo secular social insurance than groups with poorer self-rated health.

**Table 4.** Heterogeneous test results.

	Edu		Social Trust		Income		Health Status	
	(1) High	(2) Low	(3) High	(4) Low	(5) High	(6) Low	(7) High	(8) Low
Religion	−0.261 (−0.96)	−0.175 * (−1.92)	−0.262 ** (−2.47)	−0.034 (−0.23)	−0.141 (−1.31)	−0.275 * (−1.88)	−0.329 *** (−2.76)	−0.029 (−0.23)
Control variable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cons	1.783 *** (2.80)	1.236 *** (4.50)	1.069 *** (3.58)	1.354 *** (4.34)	1.205 ** (2.43)	1.403 *** (3.84)	1.556 *** (3.22)	1.372 *** (3.48)
N	1603	6291	5533	2264	5019	2909	4207	3676
Pseudo R <sup>2</sup>	0.0581	0.0330	0.0241	0.0671	0.0364	0.0467	0.0539	0.0290

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .



#### 4.4. Mechanism Analysis

The participation in social health insurance is significantly negatively affected by individual religiosity. It is important to investigate the potential mechanisms of impact. Based on the theoretical mechanism analysis above, two mechanism effects of social interaction and employment opportunity are proposed. Table 5 shows the results of testing the mechanism using interaction terms between religious belief and two mechanism variables. Column (1) examines the effect of social interaction, and the coefficient of the interaction term is significantly negative at the 5% level, indicating that the more frequent the social interaction, the lower the probability of participation in social health insurance for individuals with religious beliefs. However, the regression coefficient for religious beliefs is not significant, indicating that the effect of religious beliefs on individual participation in social health insurance is mainly influenced by the social interaction effect. Column (2) displays the effect of employment opportunities. The impact of religious beliefs on social health insurance is significantly negative at the 1% level. The coefficient of the interaction term is significantly positive at the 10% level, indicating that employment opportunities facilitate the social health insurance participation of religious believers, and that China's compulsory social health insurance for employers has a certain practical effect.

**Table 5.** Mechanism effect results.

	(1) Social Interaction	(2) Employment
	BHI	BHI
Religion	0.241 (1.20)	−0.293 *** (−2.81)
Religion × Social interaction	−0.162 ** (−2.41)	
Religion × Employment		0.346 * (1.95)
Control variable	Yes	Yes
Region dummy	Yes	Yes
Cons	1.079 *** (4.03)	1.219 *** (4.63)
N	7928	7928
Pseudo R <sup>2</sup>	0.0228	0.0270

Note: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

## 5. Conclusions

With the construction and development of China's social security system, the overall coverage rate of social health insurance can be stabilised at more than 95%. In order to achieve the comprehensive coverage of the social security system at all levels of the social structure, the high quality and comprehensive coverage of social health insurance still needs to be explored and perfected in terms of the structure of social groups, the differences in risk perception, and the coverage of protection channels. Using data from the China General Social Survey 2021 (CGSS2021), this paper examines the impact of religious beliefs on individuals' social health insurance participation behaviour. The results show that religious beliefs have a significant negative impact on social health insurance participation, and the degree of the impact of different types of religious beliefs is characterised by variability.

In terms of heterogeneity, the crowding-out effect of religious beliefs on participation in social health insurance is more pronounced in the group with no higher education. On one hand, being influenced by the rational perception of risk, the higher-educated group is more likely to comprehend and choose risk protection tools with objective criteria, and seek multi-channel ways of risk sharing and social support systems; on the other hand, being influenced by the mandatory requirement of employers for China's social health insurance, the higher-educated group is more likely to be employed by organisations with stronger legal compliance and better protection. Within the differences in social trust, the

effect is more pronounced in groups with high levels of social trust. In the framework of the social trust theory (Fukuyama 1995), the cultural characteristics of religious beliefs have a positive effect on social trust, and, in the context of high trust, the belief effect of religious organisations shapes individuals' values and cognitive norms (Iannaccone 1998), thus influencing individuals' social behaviour choices. In the differences in income levels, when compared with the high-income group, the impact on the religious believers in the lower income group is more significantly negative. Under the premise of a limited earning capacity and income expectation, based on cost–benefit consideration, the low-income group is more inclined to put their trust in spiritual prayers rather than in advanced material payment behaviour, thus resulting in the alienation of insurance participation behaviour. Among the differences in self-rated health status, the impact is more significant in the group with a good self-rated health status. The complementary features of the religious concept of salvation and the medical concept of health (Van Ness 1999), which give believers positive perceptions and self-confident attitudes towards their own health, are more likely to ignore or abandon secular support in the context of the intrinsic aggregation of religious organisations and the supervisory system.

The social interaction effect and the employment opportunity effect are potential mechanisms. In the social interaction effect, first, religious belief groups generally partake in more religious activities, which, as a component of social interaction, can enhance group trust and environmental relationships to influence individual economic decision-making behaviours (Miao et al. 2021). Second, in the field of Chinese consciousness and culture, religious belief is an important factor in group compartmentalisation and social differentiation, and religious groups have stronger internal cohesion and identity (Fukuyama 1995), which enhances the substitution effect of religious social security for secular material social security in the material–psychological dichotomy dimension of social security (Ruan et al. 2015). Finally, religion influences believers' values and embodied cognition to a certain extent (Soliman et al. 2015), and the consistency of information acquisition channels and social background similarity within religious believers further strengthens cognition within the group, thus encouraging consistent social security behavioural decisions. In the employment opportunity effect, access to employment opportunities increases the likelihood of religious belief groups' participation in social health insurance, which reflects, on the one hand, that the employer compulsory policy of China's social health insurance has a certain real effect on the protection of employment rights and the interests of religious belief groups in the adjustment work, and, on the other hand, that it shows that the employment effect is able to ameliorate the dichotomy of the religious groups' cultural system between the social welfare security and spiritual welfare security choice tendency dilemma.

It should be noted that this study empirically analyses the impact of religious belief on social health insurance participation decisions based on the cultural characteristics and group characteristics of religious believers in China, which fills the gap of exploring the influencing factors of individuals' social health insurance participation decisions with the dimension of religious belief; however, as it was limited by the degree of refinement and the availability of data, the intrinsic motivational differences and specific types of differentiation tendencies of religious belief groups still require further exploration and investigation outside of this study.

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## Notes

- <sup>1</sup> Official website of the National Medical Security Administration. Statistical Bulletin on the Development of National Medical Security in 2022. [http://www.nhsa.gov.cn/art/2023/7/10/art\\_7\\_10995.html](http://www.nhsa.gov.cn/art/2023/7/10/art_7_10995.html) (accessed on 11 December 2023).
- <sup>2</sup> Website of the Central People's Government of the People's Republic of China. The person in charge of the relevant department of the National Medical Insurance Administration answered the reporter's question on the participation of residents in medical insurance. [https://www.gov.cn/lianbo/bumen/202403/content\\_6941259.htm](https://www.gov.cn/lianbo/bumen/202403/content_6941259.htm) (accessed on 3 Mar 2024).
- <sup>3</sup> Website of the Central People's Government of the People's Republic of China. China's policies and practices to safeguard religious freedom. [https://www.gov.cn/xinwen/2018-04/03/content\\_5279419.htm](https://www.gov.cn/xinwen/2018-04/03/content_5279419.htm) (accessed on 11 December 2023).

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