

RESEARCH ARTICLE

A survey of social network status and its related factors for older adults with type 2 diabetes in Beijing, China

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Abstract

Aim: To understand the social network status of older adults with type 2 diabetes mellitus (T2DM) in Beijing, China and explore its related factors.

Design: A cross-sectional survey using a sample of convenience was conducted.

Methods: From April to September 2019, Lubben Social Network Scale-6 (LSNS-6) was used to evaluate the social network of 300 older adults with T2DM from the outpatient and inpatient departments of three hospitals and five communities in Beijing. Self-designed demographics and clinical sheets, Summary of Diabetes Self-Care Activities Scale, Social Support Rating Scale and Geriatric Depression Scale-15 were used to investigate the related factors of their social networks. The Equator Research Checklist used in this study is STROBE checklist.

Results: The score of LSNS-6 of the older adults was 16.75 ± 7.02 (scale: 0 ~ 30), the score of family network dimension was 8.32 ± 3.63 (scale: 0 ~ 15), and friends network dimension was 8.43 ± 4.74 (scale: 0 ~ 15). Additionally, 22.67% of the older adults had social isolation. Social support, medical payment, self-assessed health status, residential arrangement and smoking status were associated with the social network level of the older adults with T2DM ($p < .05$).

KEYWORDS

diabetes mellitus, type 2, older adult, self-management, social network, social support

1 | INTRODUCTION

Social network refers to the mutual relationship between individuals and their family members, relatives, friends and other interactive members (Lubben, 1988). Studies have shown that for patients with diabetes, social network is positively associated with their self-management, but that their social network is at a

medium low level (Vassilev et al., 2014; Vissenberg et al., 2016). Patients with diabetes may reduce their contact with social network members due to the effect of the disease; for example dietary restriction often reduces the patient's social activities, or the use of hypoglycaemic drugs reduces the number of gatherings. Thus, their social network level is affected negatively (Hempler et al., 2013).

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More than 90% of diabetes patients suffer from Type 2 Diabetes Mellitus (T2DM). The social network of the patients with T2DM was reported at a medium low level in research and may be affected by multiple factors such as social support, self-management and diabetes complications (Brinkhues et al., 2018; Hempler et al., 2016; Vassilev et al., 2016). Furthermore, due to inevitable factors such as retirement and ageing, older adults with T2DM may be more likely to experience a shrinking social network. However, we found no research reports on the social network status of this group of patients. Therefore, this study aims to investigate the social network status of older adults with T2DM in Beijing, China and analyse its related factors, so as to provide an approach to improve their self-management.

2 | BACKGROUND

With the population ageing, the prevalence of diabetes in older adults in China is increasing (Wu, 2017). In 2010, the prevalence of diabetes in adults aged 60 and above in China was about twice that of all adults (22.5% versus 11.6%) (Xu et al., 2013) and about 90% of the older adults with diabetes suffer from T2DM (Chi, 2000), which is also one of the most common chronic diseases (World Health Organization, 2016). Older adults with T2DM must face many lifestyle constraints; for example, due to the inconvenience caused by diet restrictions and medication, they may have limited socialization opportunities (Bot et al., 2016). Even worse, they experience shrinking social network with ageing. The magnitude of this situation suggests that managing the condition of older adults with T2DM deserves more attention in order to prevent or delay deterioration due to the disease.

Studies have shown that effective self-management improved blood glucose control in patients with diabetes, and delayed the occurrence of complications (Sherifali et al., 2015). However, older adults with T2DM are often affected by social factors such as living alone and lack of family support, which have a negative impact on their self-management. Studies show that self-management of older adults with T2DM was at a medium low level (Kurnia et al., 2017; Liu et al., 2018). A multifaceted approach is sought to improve the self-management level of older adults with T2DM, such as diabetes self-management and education activities involving family members (Chatterjee et al., 2018; Wichit et al., 2017). Self-management emphasizes change of an individual's health behaviour and lifestyle, but it is a process that involves participation by not only the patient but also the patients' social manpower resources, in order to make the health behaviour and lifestyle more effective (Stafford et al., 2008; Thoits, 2011). Borrowing the concept from sociology, social network is increasingly used in the field of diabetes self-management. Social network, through social support and social integration, plays a positive role in improving the psychological state and self-management of patients with chronic diseases such as diabetes, and the patients with a high level of social network have a better disease management level (Faquinello et al., 2011). However, research indicates that the social network of patients with T2DM was at a low/middle

level (Koetsenruijter et al., 2016; Lukaschek et al., 2017), and was affected by a patient's demographical and sociological factors (such as age, education and economic conditions), self-management, social support, psychological factors and disease factors (Brinkhues et al., 2018; Hempler et al., 2016; Vassilev et al., 2016).

Furthermore, due to factors such as retirement or decreasing physical activity, older adults gradually withdraw from work, become more isolated, and they rely more on family or friend networks for support (Antonucci, 2001). It has also been reported that social network level is closely related with the health status of older adults. Having a good social network promotes the physical and mental health of older adults, whilst having social isolation, loneliness and strained social relationships leads to higher risk of disability, poor disease prognosis and premature death (Berkman & Glass, 2000).

Considering the differences in cultural background, social environment and other aspects, the social network level and its related factors of older adults with T2DM in China may be different from those in other countries. In Beijing, the capital city of China, the elder population has reached 3.292 million, ranking second highest in the country (https://www.sohu.com/a/201292062_161623, 2017-10-31). In addition, a survey on chronic diseases in older adults in Haidian District of Beijing showed that the prevalence of diabetes was 20.96% (Jia, 2008). Older adults with diabetes are a group that needs attention. However, little or no research is available on the social network status of older adults with T2DM in China. This study aimed to investigate the social network of this at-risk group in Beijing and analyse its related factors. The findings provide a reference for the targeted intervention involving social network for this group of patients.

2.1 | Research question

What is the status of the social network of older adults with T2DM in Beijing, China, and what are the related factors?

3 | THE STUDY

3.1 | Design

In order to reduce selective bias, our research subjects are from three different hospitals and five different communities in Beijing. From April to September 2019, older adults with T2DM were selected via convenience sampling in inpatient and out-department of three hospitals and five communities in Beijing.

Inclusion criteria were as follows: age ≥ 60 years; being diagnosed as T2DM according to the diagnostic criteria of diabetes recommended by WHO in 1999 (Ge et al., 2018); living in Beijing for more than 1 year; clear consciousness, without mental retardation; and informed consent. Exclusion criteria were as follows: combined with other serious diseases, such as severe heart failure, liver/renal insufficiency, respiratory failure and malignant tumour; language communication barriers; and being unable to complete the questionnaire even with assistance.

According to the sample size requirements of the multivariate linear regression analysis model, the sample size is 5 to 10 times the number of independent variables. The number of independent variables in this study was about 30. Considering an invalid questionnaire rate of 10%, it is estimated to include at least 165 cases.

3.2 | Method

3.2.1 | Measurement

The theoretical framework of this study was formed based on a literature review and the conceptual framework of support network for the older people (Wenger, 1995) and a related confirmatory study from Lv Baojing (Lv, 2000). The theoretical framework in our study integrated the possible related factors of social network for older adults with T2DM, including five sections: personal characteristics, external environmental characteristics, self-management, medical services, and social support (See Appendix 1: Figure 1). The questionnaire packet included the demographics and clinical sheets, Lubben Social Network Sale-6, Summary of Diabetes Self-Care Activities Scale, Social Support Rating Scale, and Geriatric Depression Scale-15. The Equator Research Checklist used in this study is STROBE checklist for cross-sectional studies (See Supplementary File 1).

3.3 | Demographics and clinical sheets

3.3.1 | Self-designed

Demographics and clinical sheets included demographical sociology factors (gender, age, income, work status, occupation, education, medical payment, self-assessed health status, falls, marital status, etc.), disease factors (diabetes complications, duration of diabetes, blood sugar, etc.), culture (ethnic, religious belief), residential situation (residential area, residential arrangements, residential migration), participation in community activities and medical service attitude (cognitive, demand and using of the service).

3.4 | Lubben Social Network Scale-6

The Lubben Social Network Scale (LSNS) was first formulated by Lubben in 1988 (Lubben, 1988). LSNS is used for measuring the individual family and friend network structural characteristics (such as members of the network, size and frequency of interaction, and closeness of contact, etc.) and network support functions (including emotional support and instrumental support). Originally 10 items, LSNS was revised in 2002 as LSNS-R consisting of family network and friend network. LSNS-6 is a simplified version based on LSNS-R (Lubben et al., 2002). LSNS-6 is composed of two parts of the family network (three items) and the friend network (three items), six items in total. Each item in LSNS-6 follows five options, with a score from 0 to 5 points, and the total score is from 0 to 30 points. The higher the score, the better the social network level. The total score <12 indicates insufficient social network (social isolation). Cross-cultural verification studies have shown that LSNS-6 is more suitable for evaluating the social network level of older adults (Lubben et al., 2006). The structural validity of the Chinese version of LSNS-6 was 0.84 to 0.96, and Cronbach's α was 0.83 (Chang et al., 2018). The Cronbach's α in this study is 0.89.

3.5 | Summary of Diabetes Self-Care Activities Scale

Summary of Diabetes Self-Care Activities Scale (SDSCA) was developed by Toobert et al (Toobert et al., 2000) to assess the self-management behaviour of people with diabetics. SDSCA includes 6 dimensions, including diet, exercise, blood glucose monitoring, foot care, compliance with medicine and smoking, with 13 items total. Patients were asked about the number of days they engaged in self-management activities in the past 7 days, and the number of days is the score of this item. The score for a dimension is determined by the average score of the items from that dimension. Higher scores indicate better self-management for that dimension. In 2010, Sun Shengnan (Sun, 2010) translated and revised the SDSCA into a Chinese version, and determined that the content validity was 1.00, and the Cronbach's α of each dimension was 0.62 ~ 0.92.

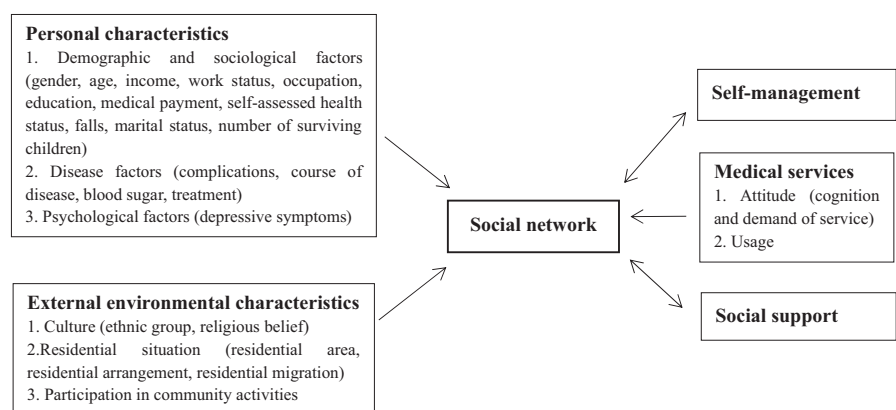


FIGURE 1 Conceptual framework of the study

3.6 | Social Support Rating Scale

Social Support Rating Scale (SSRS) is designed for the assessment of individual social support status and widely used in China (Xiao et al., 1994). The scale consists of 10 items, with three dimensions: subjective support, objective support, and usage of support. The scale is applicable to all kinds of people over 14 years old, and reflects the social support level of individuals. Cronbach's α of SSRS is 0.896, and the correlation coefficients between the three dimensions and the total scale are 0.724 ~ 0.835 (Liu et al., 2008). The total scores of SSRS are the summary of 10 items. The higher the score, the better the social support.

3.7 | Geriatric Depression Scale-15

Geriatric Depression Scale-15 (GDS-15) was developed by Sheikh (Shiekh, 1986) to assess participants' depression status over the past week with 15 items. The total score of the scale ranges from 0 to 15, and ≥ 8 indicates depression. The higher the score is, the more serious the depressive symptoms are. In 2013, Tang Dan (Tang, 2013) tested the reliability and validity of GDS-15 in the Chinese older adult population, and it showed that the Cronbach's α of the GDS-15 is 0.793, and the 1-week retest reliability is 0.728.

3.8 | Data collection

In this study, some of the older adults with T2DM were from the inpatient department and outpatient department of endocrinology in 3 hospitals in Beijing, and part of them were from five communities in Beijing. The written consent of the research institution has been obtained previous to the conduct of the study. The researchers sent out a recruitment letter from these settings and the older adult volunteers came to one of the sites to join in the study. The researchers explained the purpose and content of the study and after informed consent, the older adults filled in the questionnaires. For those who were illiterate or unable to fill in the questionnaire, the researchers read the questionnaires for them. Questionnaires with the number of missing items exceeding 10% of the total and those with obvious logic errors were eliminated. Of the 307 questionnaires completed, 7 of them were invalid, resulting in 300 valid questionnaires with an effective recovery rate of 97.7%.

3.9 | Statistical analysis

Data were input into SPSS 22.0 software. Data conforming to normal distribution were represented by mean \pm standard deviation, whilst data not conforming to normal distribution were represented by median (M) and quartile (P25, P75). According to the conceptual framework of this study, possible factors related to social network (five parts) of older adults with T2DM were taken as independent

variables, and social network scores (LSNS-6) were taken as a dependent variable. Multiple linear regression was used step by step to establish the model to analyse the independent variables with statistically significant effects on the total score of LSNS-6.

3.10 | Ethics

This study has obtained the written consent of the research institution and the oral consent of the survey subjects before conducting the survey.

4 | RESULTS

4.1 | Sample

The resulting sample consisted of 150 males and 150 females, with an age range from 60 to 89 (69.24 ± 7.60) years. Amongst them, 165 (55.0%) patients were aged 60 to 70 years, and 135 (45.0%) patients were aged 70 years or above, and 93.0% of them were retirees. The fasting blood glucose of the older adults with T2DM ranged from 3.9 to 15.0 mmol/L, with an average of 7.81 ± 1.88 mmol/L, and 40 older adults (13.3%) were in normal range (< 6.1 mmol/L). The diabetes course ranged from 1 to 40 years, with an average of 14.91 ± 8.45 years. The older adults suffered from 0 to 6 kinds of other chronic diseases and 165 suffered from complications of diabetes (55.0%). Other specific situations are shown in table A1 (See Appendix 1).

4.2 | Scores of social network (LSNS-6), self-management (SDSCA), social support (SSRS) and depression (GDS-15)

The scores of the scales LSNS-6, SDSCA, SSRS and GDS-15 are shown in table A2 (See Appendix 1). Sixty-eight older adults with T2DM (22.67%) scored < 12 on social network (LSNS-6). All of these 68 older adults lived in towns and were retirees, and 36.8% of them participated in community activities. The smoking rate of the participants was 16.0% (48/300), and the smoking number ranged from 1 to 60 cigarettes per day. Five of the older adults' scores of GDS-15 were more than 8, that is, 1.7% had depression.

4.3 | Multivariate regression analysis of related factors of social network in the study group of older adults with T2DM

According to the conceptual framework of the study, the possible related factors of social network for the older adults with T2DM include five sections: personal characteristics, external environmental characteristics, self-management, medical services, and social support. With the total score of LSNS-6 as the dependent variable,

the five sections of 29 independent variables included 16 variables of personal characteristics (gender, age, income, work status, occupation, education, medical payment, self-assessed health status, falls, marital status, number of surviving children, complications, course of disease, blood sugar, number of treatment methods and score of GDS-15), 6 variables of external environmental characteristic (ethnic group, religious belief, residential area, residential arrangement, residential migration and participation in community activities), 3 variables of self-management (score of SDSCA, smoking status and number of cigarettes smoked per day), three variables of medical service (types of medical services known, received and willing to receive), and one variable of social support (score of SSRS). Multiple linear regression was used step by step to establish the model to analyse the independent variables with statistically significant effects on the total score of LSNS-6. Finally, five variables were entered into the model, including residential arrangement, self-assessed health status, smoking status, medical payment, and total score of social support. Wald test showed that there was no collinearity in the model. The F -value was 8.985, and $p < .01$, that is, the fitted model was statistically significant (table A3, See Appendix 1).

5 | DISCUSSION

5.1 | Social network status of the older adults with T2DM in Beijing

In recent years, the concept of social network has been gradually implemented in the study of chronic diseases, especially in diabetes. In our study, on a scale of 0–30, the overall average score of the social network of older adults with T2DM was 16.75, which indicated that the social network of the older adults with T2DM in Beijing was at a medium level. Moreover, 22.67% of them had social isolation (LSNS-6 score < 12). Compared with the research of Meng et al. (Meng et al., 2016) on healthy older adults, the total score of social network of the older adults with T2DM was lower than that of healthy older adults in community, and the incidence of social isolation is higher than that of the healthy older adults. Due to their diabetes, these older adults experience great challenges in their lifestyle. For example, diet control and restriction make it less convenient for them to have dinner with others, and insulin injection may make them unable to go out for an extended time. And what is worse is, due to retirement or physical weakness or other problems with ageing, most of the older adults' social activities are limited to their families or communities, and the size of their social networks tend to be smaller. It is suggested that medical staff should attach importance to the social network of older adults with T2DM, give more social support from community or social organizations, encourage their family members and/or friends to visit them, to participate in the self-management process, and thus promote the level of the older adults' social network and finally improve their control of their overall condition.

5.2 | Related factors of social network in older adults with T2DM

In the study, through multiple stepwise regression analysis, five variables entered the final model. According to the range of Beta, the variables associated with the social network level of older adults with T2DM are: residential arrangement (living with family), self-assessed health status (general), smoking, medical payment (medical insurance), and total score of social support. These five variables explained 54% of the change of social network level in these elders, and the model has a good fitting degree.

The fifth variable, social support, refers to the degree of spiritual and material connection between individuals and all aspects of society, including relatives, friends, colleagues, and partners, and social organizations such as families and units (Yang, 2012). The finding in this study showed that social support was positively associated with the social network level of the older adults with T2DM. When the social support model entered the model, R_c^2 rose highest, from 0.245 to 0.540, which means social support was the most important factor in the final model. This result is similar to the study results of Ninomiya et al (Ninomiya et al., 2018) and Vassilev et al (Vassilev et al., 2016) on adults with diabetes. We believe that social support is an important factor to the social network of adults with diabetes of all ages. The higher the level of social support, the more probably the older adults are to develop a wide and positive network of friends and family, which in turn moves them to a higher level of social network.

As for the medical payment, our study showed that the older adults with T2DM who pay for medical insurance have a lower score in social network than those who receive free medical service. Free medical service is a social security system implemented by the state to protect state functionaries in China (Bureau & of Health, Beijing Municipal Bureau of Finance, 1990). Most of the patients who enjoy free medical services in China are the staff members of public institutions who are in the establishment and whose salaries are expended in the state budget, such as government departments, scientific research units, and universities. They have stable incomes, relatively secure medical expenses, and have their own stable circle of friends and life circle, so they tend to have a relatively stable social network level. Our study also found that, compared with the older adults with poor self-assessed health status, those with general self-assessed health status had a lower level of social network. The reason may be that patients with poor self-assessed health status receive more attention from family and friends, who may interact with patients more frequently and closely in their daily life, thus patients experience a higher level of social network.

To our surprise, the older adults with T2DM who lived with family had a lower level of social network than those who lived alone. Loneliness was one area where older people feel unprotected and vulnerable (Zapata-López et al., 2015). The older adults who live alone may feel lonely and are more likely to socialize with other people or make new friends; thus, they believe they have a higher level of social network. In contrast, when the older adults live with family, they may have fewer opportunities and time to socialize with

their friends, as most of their time is occupied by daily household chores and communication with family members. Over time, their social interaction scope gradually narrows, and the level of social network is limited. In addition, we found that smoking patients had a higher social network level than non-smoking patients. "Smoking is harmful to health" is well known, but smoking is often widely used in social life as a socializing tool, which may be one of the reasons why the patients who smoked registered a higher level of social network. However, because of the harm of smoking, older adults should be encouraged to consider other social activities such as playing table games or dancing rather than be encouraged to smoke.

5.3 | Limitations

This is a cross-sectional study, so it is not possible to determine the causal relationship between social network and related factors such as social support and residential arrangement for older adults with T2DM. In the future, a longitudinal design will be necessary to clarify the causal relationship between them to make full use of the social network resources of older adults with T2DM to improve their health status.

6 | CONCLUSION

The social network of older adults with T2DM in Beijing is at an intermediate level, and about a quarter of them suffer from social isolation. Social isolation happens too often in retired elder patients with T2DM. The older adults with a high level of social support, free medical service, poor self-assessed health status, living alone and smoking have a higher level of social network. When providing nursing care for older adults with T2DM, medical staff should pay attention to the level of patients' social network, and take the related factors into account.

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CONFLICT OF INTEREST

None of the authors have conflicts of interest or financial or other contractual agreements that might cause conflicts of interest.

AUTHOR CONTRIBUTIONS

KY and YL designed the project. KY, SW, QW, LW and JL collected the data. KY and YL performed statistical analysis. KY wrote the article. YL and XY modified the article. All authors discussed the results and commented on the manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

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APPENDIX 1

The figures and tables

TABLE A1 Demographics and clinical characteristics of 300 older adults with T2DM

Factor	n	Proportion (%)	Factor	n	Proportion (%)
Marital status			Medical payment		
Unmarried	3	1.0	Free medical service	33	11.0
Married	260	86.7	Medical insurance	261	87.0
Divorced	4	1.3	Rural medical care	4	1.3
Death of a spouse	33	11.0	At one's own expense	2	0.7
Ethnic group			Work status		
Han nationality	285	95.0	On-the-job	21	7.0
Ethnic minorities	15	5.0	Retired	279	93.0
Religious beliefs			Migration in past year		
No	283	94.3	No	234	78.0
Yes	17	5.7	Yes	66	22.0
Education			Falls in past year		
Primary or below	21	7.0	No	238	79.3
Junior high school	99	33.0	Yes	62	20.7
Senior high school	78	26.0	Community activity participation		
College degree or above	102	34.0	Never	135	45.0
Residential arrangements			Occasionally	70	23.3
Living alone	31	10.3	Often	95	31.7
Living with family	267	89.0	Self-assessed health status		
Living with others	2	0.7	Poor	91	30.3
Residential area			General	165	55.0
City and town	293	97.7	Good	44	14.7
Rural	7	2.3	Number of surviving children		
Monthly income (Yuan)			0	10	3.3
<5000	82	27.3	1	165	55.0
5000 ~ 8000	120	40.0	2	98	32.7
>8000	98	32.7	≥3	27	9.0
Treatment methods			Medical services (Received)		
Diet	292	97.3	Institution care	4	1.3
Exercise	216	72.0	Home care	91	30.3
Oral hypoglycaemic agent	237	79.0	Community care	254	84.7
Insulin injection	194	64.7	Hospital care	274	91.3

TABLE A2 LSNS-6, SDSCA, SSRS, GDS-15 scores of 300 older adults with T2DM

Scale	Score [$-x \pm s/M(P25, P75)$]
LSNS-6	16.75 \pm 7.02
Family network dimension	8.32 \pm 3.63
Friend network dimension	8.43 \pm 4.74
SDSCA	4.64 \pm 0.99
Diet	4.19 \pm 1.30
Movement	7.00(5.00, 7.00)
Blood glucose monitoring	3.00(1.00, 5.00)
Foot care	5.00(2.63, 7.00)
Compliance with medicine*	7.00(7.00, 7.00)
GDS-15	2.00(1.00, 3.00)
SSRS	40.50 \pm 7.45

* $n = 292$

TABLE A3 Results of multiple regression analysis of social network related factors

Variables	Model 1			Model 2			Model 3			Model 4			Model 5		
	Beta	t	p	Beta	t	p	Beta	t	p	Beta	t	p	Beta	t	p
I Personal trait variables															
Age	-0.307	-4.535	.000	-0.295	-4.346	.000	-0.266	-3.939	.000	-0.268	-3.910	.000	-0.065	-1.166	.245
Income	1.471	2.501	.013	1.455	2.470	.014	1.362	2.364	.019	1.369	2.354	.019	-0.249	-0.528	.598
Occupation2	2.255	2.108	.036	2.078	1.960	.051	1.411	1.345	.180	1.396	1.324	.187	0.410	0.495	.621
Occupation5	2.950	2.443	.015	2.680	2.198	.029	2.220	1.856	.065	2.19	1.815	.071	-0.336	-0.348	.728
Occupation7	5.069	2.247	.025	4.665	2.086	.038	4.466	2.046	.042	4.489	2.035	.043	1.353	0.778	.437
Education3	-2.541	-2.342	.020	-2.392	-2.203	.028	-1.946	-1.828	.069	-1.963	-1.824	.069	-1.172	-1.391	.165
Medical pay2	-1.990	-1.578	.116	-1.794	-1.435	.153	-1.743	-1.428	.154	-1.722	-1.402	.162	-2.281	-2.375	.018
Health2	-2.072	-2.308	.022	-2.130	-2.360	.019	-1.915	-2.173	.031	-1.907	-2.148	.033	-2.558	-3.682	.000
Children	1.411	1.988	.048	1.394	1.977	.049	1.163	1.676	.095	1.177	1.680	.094	0.395	0.718	.473
Treatment	2.236	3.153	.002	1.960	2.735	.007	0.787	1.026	.306	0.782	1.013	.312	0.860	1.428	.155
Score of GDS-15	-0.611	-3.140	.002	-0.494	-2.491	.013	-0.291	-1.451	.148	-0.293	-1.435	.152	-0.030	-0.188	.851
II External environmental characteristic variables															
Residential2				-1.014	-0.627	.531	-0.885	-0.556	.578	-0.918	-0.572	.568	-2.830	-2.241	.026
Activity3				2.976	3.327	.001	2.775	3.160	.002	2.763	3.113	.002	-0.117	-0.160	.873
III Self-management variables															
Score of SDSCA							1.882	4.031	.000	1.879	3.968	.000	0.680	1.784	.076
Smoking status*							1.272	0.821	.412	1.286	0.818	.414	2.459	1.997	.047
IV Medical service variables															
Known medical services										-0.273	-0.251	.802	-0.061	-0.072	.943
Received medical services										0.001	0.001	.999	0.139	0.188	.851
Willing to accept medical services										0.370	0.340	.734	-0.011	-0.013	.990
V Social support variable															
Score of SSRS													0.653	12.849	.000
R ²	.271			.312			.354			.354			.608		
R _c ²	.193			.215			.254			.245			.540		
F	3.466			3.209			3.542			3.262			8.985		
p	.000			.000			.000			.000			.000		

Note: Medical pay2 refers to medical insurance; health2 refers to general self-related health status. Residential2 refers to living with family; smoking status: yes = 1, no = 0. *smoking status is a dimension of SDSCA. This dimension is not a scoring system and is listed separately.