

Research Article

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Correlation of Treatment Compliance, Treatment Attitude and Belief, and Quality of Life in Community Hypertensive Patients

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Abstract

Objective: To explore the relationship between treatment compliance, treatment attitude and belief, and quality of life in patients with hypertension in the community, and to provide evidence for improving their quality of life.

Methods: A convenient sampling method was used to survey 250 patients with hypertension who met the inclusion criteria using the General Questionnaire, Treatment compliance, Treatment Attitudes and Beliefs, and Quality of Life Scale.

Results: The total score of treatment compliance of hypertension patients in the community was (91.678±11.431), treatment attitude and belief score (70.407±9.008), quality of life score (113.599±13.511), Pearson correlation analysis showed that the treatment compliance of hypertension patients was positively correlated with quality of life ($r=0.433$, $P<0.01$), and treatment attitude and belief were positively correlated with quality of life ($r=0.463$, $P<0.01$).

Conclusion: The quality of life of patients with hypertension in the community is related to treatment compliance and treatment attitudes and beliefs.

Key words: Hypertension; Treatment compliance; Treatment attitudes and beliefs; Quality of life

Introduction

Hypertension is a chronic non-communicable disease that threatens the health of the world and the health of our country. It is an irreversible life-long disease and one of the key diseases in community chronic disease management. With the development of social economy, the increase of life pressure, lifestyle changes, etc., the incidence of hypertension continues to increase. The

management of hypertension is a long-term process. If you can not effectively control blood pressure, it will eventually lead to important organ complications such as heart, brain and kidney, which will seriously affect the life and quality of life of patients^[1]. Some studies have suggested that^[2], patient treatment compliance is an important prerequisite for ensuring treatment effect, reducing complications and improving patients' quality of life. In recent years, researchers have gradually introduced social psychology factors to improve the therapeutic compliance of patients with hypertension^[3].

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Studies have shown that patients' attitudes and beliefs about anti hypertensive therapy are the influencing factors of treatment compliance and treatment effect^[4]. Therefore, this study enrolled hypertension patients in two communities in Shanxi Province as the survey object to explore the relationship between treatment compliance, treatment attitude and belief, and quality of life. It provides reference for improving patients' treatment compliance and improving their quality of life. The report is as follows:

Research objects and methods

Research object

The survey respondents were eligible for hypertension in two communities in Shanxi Province from April 2019 to June 2019. Inclusion criteria were that patients must meet the following conditions: (1) the diagnostic criteria for hypertension^[5], (2) age 18~75 years, (2) living in the survey area ≥ 1 year, (4) no mental and cognitive impairment or no such signs presently, (4) understanding their condition, volunteering to participate in this study. Exclusion criteria were that patients had serious organ diseases such as severe heart, kidney, liver failure or patients had mental illness.

Survey method

The researchers distributed questionnaires to 250 patients who met the inclusion criteria, explained the purpose and precautions of the survey to the patient in a unified instruction, and answered the questions from the patients. The questionnaires were completed independently and collected on the spot. 236 effective questionnaires was recovered, and the effective recovery rate was 94.4%. All the patients signed informed consents before the completion of questionnaire.

Research Tools

General Information Table. It includes demographic characteristics and history of illness and family history.

Therapeutic compliance Scale. This scale was compiled by Tang Hongying^[6], including four dimensions of compliance with medication behavior, poor medication

behavior, daily life management behavior, and tobacco and alcohol hobby management behavior. This scale contains 25 entries in total, The Cronbach's α of the scale is 0.863.

Therapeutic Attitude and Belief Scale. This scale was compiled by Tang Hongying^[7], including medication treatment attitudes and beliefs, treatment of lifestyle attitudes and beliefs, persistent treatment distress concerns, adherence to treatment attitudes and beliefs, and a total of 21 items. The Cronbach's α of the scale is 0.804.

Quality of Life Scale (SF-36). Developed by the Boston Institute of Health in the United States, it has been widely used to measure the quality of life of the general population^[8], and can comprehensively assess the physical, psychological and social functions of individuals and groups. Divided into two aspects of physical health and mental health, including physiological functions, physiological functions, physical pain, general health, social function, emotional function, mental health, vitality and health changes, a total of 36 items. According to the content of each dimension, the problem entries are set, each item is coded, the scores of each item are added to the actual score of the dimension, and then the actual score is converted into a standard score according to the formula, and the sum of the scores of each dimension is SF-36. Standard score=(actual score - lowest score for this dimension) / (highest score for this dimension-lowest score for this dimension) $\times 100$ ^[9].

Statistical analysis

Statistical analysis was performed using SPSS19.0. The measurement data were presented as mean \pm standard deviation ($\bar{x} \pm s$), the frequency and composition ratio of the count data were used, and the differences between groups were compared by analysis of variance and test. The correlation between variables was analyzed by Pearson correlation analysis.

Results

General information includes demographic characteristics and history of illness and family history, using frequency

and composition ratio for statistical description (Table 1). The compliance of treatment on hypertension patients was shown in Table 2. The treatment attitude and belief scores of hypertensive patients were shown in Table 3. The

quality of life score of patients with primary liver cancer was shown in Table 4. The correlation between treatment compliance, treatment attitude and belief, and quality of life using Pearson correlation analysis is shown in Table 5.

Table 1 General information of patients

Variables	Number of cases	Composition ratio
Age (years)		
18-44	14	5.9%
45-59	142	60.1%
60-75	80	34.0%
Gender		
Male	101	42.8%
Female	135	57.2%
Educational level		
Primary school	20	8.5%
Middle school	151	64.0%
Undergraduate	65	27.5%
Marriage		
Married	178	75.4%
Unmarried/divorced/ widowed	58	24.6%
Career		
In-service	62	26.3%
Retirement	40	16.9%
Unemployed	134	56.8%
Income (RMB)		
≤2000	17	7.2%
2000-3999	105	44.5%
4000-5999	98	41.5%
≥6000	16	6.8%
Type of medical insurance		
Medical insurance	168	71.2%
NCMS	32	13.6%
Self-pay	36	15.2%
Hypertension grading		
Level 1	133	56.3%
Level 2	57	24.2%
Level 3	46	19.5%
Cardiovascular family history		
Have	51	78.4%
No	185	21.6%
Complication		
Have	12	5.1%
No	224	94.9%

Table 2 Treatment compliance scores of hypertensive patients

Items	Maximum (Minute)	Minimum (Minute)	Score ($\bar{x} \pm s$)	Scoring rate (%)
Medication Compliance	5.00	25.00	18.754±4.186	75.016
Poor medication compliance	8.00	40.00	30.004±6.035	75.010
Life management compliance	20.00	50.00	35.030±4.740	70.060
Tobacco and alcohol management compliance	2.00	10.00	7.890±2.234	78.901
Dependency total score	54.00	125.00	91.678±11.431	73.342

Note: Scoring rate=actual score of each item / theoretical maximum score×100%

Table 3 Treatment attitude and belief scores of hypertensive patients

Items	Maximum (Minute)	Minimum (Minute)	Score ($\bar{x} \pm s$)	Scoring rate (%)
Medication belief	7.00	35.00	21.754±4.453	62.154
Lifestyle belief	15.00	35.00	23.746±3.707	67.845
Treatment confusion	4.00	13.00	9.305±1.718	62.033
Adhere to the belief in treatment	10.00	20.00	15.602±2.691	78.010
Total score of attitude and belief	49.00	102.00	70.407±9.008	67.054

Note: Scoring rate=actual score of each item / theoretical maximum score×100%

Table 4 Quality of life scores of hypertensive patients

Items	Maximum (Minute)	Minimum (Minute)	Score ($\bar{x} \pm s$)	Scoring rate (%)
Physiological function	14.00	30.00	27.076±3.218	90.253
Physiological limitations	4.00	12.00	6.976±1.708	87.200
Somatic pain	2.00	36.00	9.582±2.407	87.109
Overall health	10.00	60.00	17.133±3.856	68.532
Physiological health score	41.00	85.00	60.769±6.747	82.120
vitality	7.00	24.00	17.255±3.300	71.895
Social function	3.00	12.00	8.632±1.666	86.320
Emotional function	3.00	26.00	5.632±2.117	93.866
Mental Health	6.00	30.00	21.347±4.352	71.156
Mental health score	27.00	82.00	52.840±8.669	75.485
Total quality of life	82.00	149.00	113.599±13.511	78.888

Note: Scoring rate=actual score of each item / theoretical maximum score×100%

Table 5 Correlation between treatment compliance, treatment attitude and belief, and quality of life in patients with hypertension

Items	Physiological function	Somatic pain	Somatic pain	Overall health	Physiological health score	Vitality	Social function	Emotional function	Mental Health	Mental health score	Total-quality of life
Compliance with medication	0.139*	0.009	0.086	0.145*	0.178**	0.252**	0.159*	0.019	0.240**	0.242**	0.244*
Poor medication compliance	0.314**	0.139*	0.168**	0.034*	0.264**	0.262**	0.131*	0.120	0.217**	0.262**	0.300**
Life management compliance	0.309**	0.275**	0.140**	0.219**	0.392**	0.378**	0.274*	0.178**	0.295**	0.386**	0.445**
Tobacco and alcohol management compliance	0.504	-0.023	0.010	-0.067	-0.015	0.031	0.063	0.021	-0.017*	0.021	0.006
Dependency total score	0.356**	0.179**	0.180**	0.149*	0.364**	0.393**	0.254**	0.134*	0.332**	0.391**	0.433**
Medication belief	0.192**	0.198**	0.039	0.098	0.212**	0.202**	0.075	0.183**	0.241**	0.254**	0.268**
Lifestyle belief	0.284**	0.225**	0.141*	0.349**	0.442**	0.381**	0.274**	0.172**	0.277**	0.376**	0.462**
Treatment confusion	0.077	0.126	0.018	0.237**	0.210**	0.221**	0.106	0.125	0.169**	0.219**	0.245**
Adhere to the belief in treatment	0.048	0.350**	0.517**	0.256**	0.433**	0.518**	0.350**	0.517**	0.256**	0.433**	0.518**
Total score of attitude and belief	0.241**	0.211**	0.080	0.299**	0.368**	0.428**	0.225**	0.187**	0.373**	0.436**	0.463**

Note: ** $P < 0.01$, * $P < 0.05$

Discussion

The quality of life of patients with hypertension in the community is at a medium level. The results of the study showed that the patient's quality of life score was (113.599 ± 13.511) points, See Table 4) and the score was 78.888%, which was at a medium level, which was consistent with the results of Kitaoka^[10] and Xu *et al.*^[11]. In the sub-scales of patients' quality of life, the physiological health score rate is higher than the mental health score rate, indicating that the quality of life of patients with hypertension in the community is mainly mental health status. This may be due to hypertension as a chronic, lifelong disease, poor long-term blood pressure control, disease risk factors and complications need to be frequently treated and the treatment effect is not good, which brings a greater psychological burden to patients^[12]. Therefore, community medical workers should promptly identify the psychological changes of patients, pay attention to mental health, and promote the improvement of the disease. At the same time, it is hoped that community medical workers will pay attention to the health education work of community residents, especially hypertensive patients, and help the community to cope with hypertension patients. The physical and psychological damage caused by the disease.

There is a positive correlation between treatment compliance and quality of life in community hypertension patients. The results of this study shows that the patient's treatment compliance score is (91.678 ± 11.431) points, See Table 2) which is at a medium level, is consistent with the results of Li *et al.*^[13]. The result also shows that the patient's treatment compliance is positively correlated with quality of life ($P < 0.01$, See Table 5), that is, the treatment compliance of hypertensive patients has a positive predictive effect on quality of life, suggesting that good therapeutic compliance is beneficial to reduce the occurrence of complications and improve the quality of life of patients, and vice versa. Correlation analysis also shows that patients' life management compliance is more closely related to quality of life, indicating that life management of hypertensive patients is particularly important to improve their quality of life. Therefore, it is

suggested that medical personnel should join the family in all-round and multi-level efforts to improve the living environment of patients, improve bad living habits, and practice good and healthy living habits throughout their life, and consciously form healthy behaviors. Furthermore, by regularly holding high-pressure knowledge lectures, video lectures, one-on-one health consultations, personalized health education, etc., the channels and opportunities for patients to communicate with professional medical staff are increased, and patients are urged to improve their treatment compliance^[14]. In order to better control blood pressure and reduce complications, the quality of life of patients is improved.

There is a positive correlation between treatment attitude and belief and quality of life in community hypertension patients. The results of this study shows that the patient's treatment attitude and belief score is (70.407 ± 9.008) points, see Table 3), which is at a moderately low level, is consistent with the results of Martha and Hill^[15]. This result may be related to the cultural level and income of the subjects. It also shows that patients' treatment attitudes and beliefs were positively correlated with quality of life ($P < 0.01$, See Table 5), that is, the treatment compliance of hypertensive patients has a positive predictive effect on quality of life, suggesting that positive treatment attitudes and beliefs have an important role in improving patients' quality of life. Some studies^[16,17] have concluded that, positive treatment attitudes and beliefs are conducive to the improvement of patient compliance, reduce the incidence of complications, and improve clinical outcomes. This suggests that community medical staff will continue to conduct health knowledge lectures, community clinics, and pressure control techniques to strengthen the health knowledge of hypertension in order to improve the management of chronic diseases in the community and Cognition. In particular, attention and support should be given to patients with low academic qualifications, low income, and low social support^[18]. While carrying out health education, medical staff organize and conduct effective patient interactions to share experiences and exchanges among patients with better disease management, so as to encourage other patients to establish positive treatment

attitudes and beliefs, enhance confidence in treating diseases, and be proactive.

Summary

In summary, the quality of life of patients with hypertension in the community needs to be improved, and the quality of life and treatment compliance, treatment attitude and belief are positively correlated. This suggests that community health workers should focus on cultivating patients' positive attitudes and beliefs, the patient's life management compliance, lifestyle and adherence to treatment beliefs, etc. in the process of chronic disease management, thus improving their therapeutic compliance. At the same time, through regular health education lectures, community clinics and other means to strengthen the education of community hypertension patients, and to fully mobilize the patient's subjective initiative should be done, so that patients actively participate in the treatment and management of disease, in order to improve the clinical outcomes and the quality of life of patients.

Declaration

All authors of this article declare they have no conflicts of interest.

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