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Effect of Group Continuous Nursing Intervention Model on Serum Biochemical Parameters, GSES Assessment, DSQL Assessment and Satisfaction of Diabetic Patients

Xiaohua Fang, Jinyi Li*

Comprehensive Ward, The First Affiliated Hospital of Jinan University, Guangzhou, China

Email address:
1693732446@qq.com (Xiaohua Fang), 1159279959@qq.com (Jinyi Li)
*Corresponding author

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Abstract: Objective: To assess effect of group continuous nursing intervention model on serum biochemical parameters, general self-efficacy scale (GSES) assessment, Diabetes Specific Quality of Life Scale (DSQL) assessment and satisfaction of diabetic patients. Methods: A total of 150 patients with type 2 diabetes who were admitted from June 2017 to October 2019 at the First Affiliated Hospital of Jinan University were randomly selected as the research subjects. They were divided into intervention group and control group (75 cases each group) according to the mode of health nursing intervention. Control group patients received common nursing intervention, and intervention group patients received group continuous nursing intervention. We collected the valid data from the changes of serum biochemical level, self-efficacy, diabetes specific quality of life and clinical nursing satisfaction were observed before and after the intervention. Result: In serum indicators, the results were not significantly different before nursing intervention ($P > 0.05$), and these indicators of the intervention group were significantly lower compare with the control group ($P < 0.05$). before nursing intervention, the GSES assessment of the two groups of patients were not statistically significant ($P > 0.05$), and the GSES assessment of the two groups of patients were significantly increased after nursing intervention, but the GSES assessments of the patients in the intervention group were significantly higher than those of the control group ($P < 0.05$). In diabetes specific quality of life assessment, The DSQL evaluation of the patients in the intervention group after nursing intervention was significantly higher than the control group ($P < 0.05$). After nursing intervention, the clinical nursing satisfaction of patients in the intervention group reached 98.67%, which was significantly higher than that in the control group (81.33%), and the comparison between groups was statistically significant ($P < 0.05$). Conclusion: group continuous nursing intervention can significantly improve serum indicators, diabetes specific quality of life, self-efficacy, and clinical nursing satisfaction.

Keywords: Group Continuous Nursing Intervention, Serum Biochemical Indicators, Clinical Nursing Satisfaction, General Self-efficacy Scale Assessment, Diabetes Specific Quality of Life

1. Introduction

Diabetes mellitus is a metabolic disorder syndrome, that it was associated with sugar, protein, fat, water and electrolytes [1]. decreased islet function and insulin resistance caused diabetes mellitus by pathogenic agents act together, that the pathogenic agents included genetic factors, environmental factors, immune dysfunction, microbial infection and its toxin, free radical toxin, and mental factors [2, 3]. Recently, the International Diabetes Federation (IDF) published the latest global diabetes map on its official website. According to its report, the number of people with diabetes worldwide reached 463 million in 2019, and about 4.2 million people died due to diabetes and its complications. Also, it is estimated that the number of diabetes cases worldwide could increase to 578.4 million by 2030 and 700.2 million annually by 2045 [4].

Based on China's "Healthy China Action (2019-2030)" report, the government's inclusion of diabetes in the campaign

is meant to prompt residents to take their blood sugar levels seriously. In addition, the report provides guidance for health care organizations to improve blood glucose management in patients with diabetes to delay or prevent the progression of diabetes. The government has also asked medical organizations to further promote grassroots diabetes and complete the standardization of screening and diagnosis and treatment of the onset of diabetes. It also requires the standardized management rate of diabetes in China to reach more than 60 percent by 2022 and more than 70 percent by 2030 [5].

According to the report, systematic health management can prevent and delay the course of disease, improve the health level of patients and reduce medical expenditure, and has high economic and social value for diabetic patients [6]. In addition, some researchers indicated that group continuity of nursing intervention model can improve patients' blood glucose levels, self-efficacy, and diabetes specific quality of life [7]. group continuous nursing intervention model is a new model of health management intervention in recent years. Therefore, effect of group continuous nursing intervention model for diabetic patients is worth studying. We conducted a randomized controlled trial that evaluated the effects of group continuous nursing intervention model on patients with diabetes by analyze serum biochemical parameters, general self-efficacy scale (GSES) assessment, Diabetes Specific Quality of Life Scale (DSQL) assessment and satisfaction. The aim of this study was to evaluate impact of group continuous nursing intervention model.

2. Methods

2.1. Participants Enrollment and Survey Methods

To assess the effect of group continuous nursing intervention model on diabetic patients, we assess serum biochemical parameters, GSES assessment, DSQL assessment and satisfaction of patients. From June 2017 to October 2019, we collected the data from 170 patients with diabetes mellitus, but we excluded data from 20 patients who they lack necessary information or they did not meet the standards, so we only collected valid data from 150 patients with diabetes mellitus. In this study, we randomly assigned patients to an intervention group (n =75) and a control group (n =75), and provided different nursing interventions for both groups. In addition, patients' gender, age, course of disease and level of education were significantly different between the two groups, as shown in Table 1. After nursing intervention 6 mouths, we collected satisfaction assessment, serum indicators and general self-efficacy assessment by satisfaction research questionnaire, Roche glucometer and GSES [9, 10]. Before the intervention and 6 months after the intervention, we collected diabetes specific quality of life by DSQL [11].

Table 1. *Patient characteristic.*

Item	Intervention group (n = 75)	Control group (n =75)	x^2/t	P value
Gender			0.116	0.734
Male [n (%)]	47 (62.67)	49 (65.33)		
Female [n (%)]	28 (37.33)	26 (34.67)		
Age (year) (Mean±SD)	355.1±7.4	53.6±8.0	1.192	0.235
Course of disease			0.110	0.947
< 5 years [n (%)]	17 (22.67)	16 (21.33)		
5 – 10 years [n (%)]	33 (44.00)	35 (46.67)		
≥ 10 years [n (%)]	25 (33.33)	24 (32.00)		
level of education			0.176	0.916
Primary school [n (%)]	26 (34.67)	27 (36.00)		
Middle school [n (%)]	34 (45.33)	35 (46.67)		
College degree or above [n (%)]	15 (20.00)	13 (17.33)		

Inclusion criteria: (1) All the selected subjects met the diagnostic criteria of diabetes in the Chinese Guidelines for the Prevention and Treatment of Type 2 Diabetes (2017 Edition) [8]. (2) between 30 and 80 years old; (3) Normal language function and cognitive function; (4) Those who have lived locally for a long time and have the qualifications to complete the study; (5) Patients and their family members agreed to participate in the study and signed the informed consent on the basis of knowing the purpose and method of this study. Exclusion criteria: (1) Patients diagnosed with other chronic diseases or with severe diabetes complications before participating in the study; (2) Severe abnormal liver and kidney function; (3) People with language and cognitive dysfunction or mental diseases; (4) emigrated or died during the study period; (5) unable to cooperate with medical staff to complete the research; (6) Patients who did not participate in group activities for more than 2 times in the nursing study.

2.2. Nursing Intervention Methods

In control group, the participants received common nursing intervention. Nurses carried out holding meet of health knowledge for patients, that the content including daily diet, medication and regular review. Also, nurses conducted telephone follow-up at 1 week, 1 month, 3 months and 6 months after discharge when patients were discharged from hospital.

In intervention group, the participants received group continuous nursing intervention. Nurses provided group continuous nursing intervention to the participants based on carrying out common health education. Frequency of group continuous nursing intervention is a time per week and 60 minutes per time, and period of group continuous nursing

intervention is 8 weeks. Furthermore, group continuous nursing intervention consists of 9 steps, the content is as follows: (1) Establishing a group continuous nursing intervention team. The team is headed by the head nurse of the hospital's general department, and members consists of 1 general physician, 1 general nurse, 1 rehabilitation physician, 1 medical psychologist and 2 medical social workers. The venue is the community room; (2) The opening activities (First week). The group leader introduces the purpose, significance and related plans of the group activities to the members, and members get to know each other by organizing activities; (3) Health education (from second week to seventh week). We provided related knowledge to members by organizing activities; (4) Conclusion activity (eighth week). We summarized the previous activities and tested the participants' diabetes awareness. After this group activity, the group continuous nursing intervention team will follow up the participants by telephone for 6 months, the frequency is twice a month.

2.3. Statistical Analysis

The data in this study were collected by two researchers using Excel, and the statistical software SPSS 26.0 was used for statistical analysis. serum indicators, GSES assessment and DSQL assessment measurement data were described by Mean ± SD, and analyzed by t test. Besides, clinical nursing satisfaction was expressed as (%) and X2 test was performed on them. The statistically significant differences in the evaluation results of the two groups were described as $P < 0.05$.

3. Result

3.1. Comparison of Serum Indicators Between the Two Groups Before and After Intervention

To assess effect of group continuous nursing intervention model for serum indicators of patient, we detected and analyzed the serum indicators of two groups before and after intervention. Before nursing intervention, serum index was no significantly difference, the serum index included fasting blood-glucose (FBG), postprandial blood glucose at two hours (2h PG), and hemoglobin (HbA1c). The results showed that both of group continuous nursing intervention and common nursing intervention improved the serum index for the patients. Compared with control group, intervention group had better outcome in serum index. Because the indexes of FBG, 2h PG and HbA1c in the intervention group were significantly lower than those in the control group, and the results were statistically significant ($P < 0.05$), as shown in Table 2. Therefore, group continuity of nursing interventions can ensure that patients' blood glucose levels remain consistently and stably low.

Table 2. *Statistical analysis of changes of serum indicators before and after intervention in two groups (Mean±SD).*

Item	FBG (mmol/L)		t	P value	2h PG (mmol/L)	
	BN	FN			BN	FN
Control group (n = 75)	12.18±2.52	8.03±1.27*	13.639	<0.001	15.31±3.98	11.99±2.46*
Intervention group (n = 75)	12.13±2.49	6.61±0.77	17.103	<0.001	15.28±4.02	8.67±1.81
t	0.052	8.280			0.046	6.101
P value	0.959	<0.001			0.963	<0.001

Table 2. *Continued.*

Item	t	P value	HbA1c (%)		t	P value
			BN	FN		
Control group (n = 75)	6.576	<0.001	10.52±2.44	8.28±1.23*	7.600	<0.001
Intervention group (n = 75)	12.146	<0.001	10.49±2.36	6.84±0.75	11.878	<0.001
t			0.086	4.686		
P value			0.932	<0.001		

FBG = fasting blood-glucose
2h PG = Postprandial blood glucose at 2 hours
HbA1c = hemoglobin
BN = Before carrying out nursing intervention
FN = After carrying out nursing intervention
* indicates that the result is statistically significant compared with the intervention group ($P < 0.05$)

3.2. Comparison of GSES Assessment before and After Intervention Between Two Groups

Before nursing intervention, the GSES assessment of two groups was no significantly difference. After nursing intervention, GSES assessment were significantly improved in both groups, but GSES assessment of the intervention group were significantly higher than those of control group. Their results were statistically significant ($P < 0.001$). Therefore, group continuous nursing intervention is helpful to improve the level of self-efficacy of patients with diabetes, and its effect is better than common nursing intervention (Table 3).

Table 3. *Statistical analysis of GSES assessment before and after nursing intervention between two groups (Mean±SD).*

Item	BN	FN	t	P value
Intervention group (n = 75)	30.6±6.0	46.3±2.9	18.274	<0.001
Control group (n = 75)	30.2±6.2	34.7±4.4*	6.265	<0.001
t	0.573	19.063		
P value	0.568	<0.001		

BN = Before carrying out nursing intervention
FN = After carrying out nursing intervention
* indicates that the result is statistically significant compared with the intervention group (P < 0.05)

3.3. Comparison of DSQL Assessments Before and After Intervention Between Two Groups

Before nursing intervention, four factors of diabetes specific quality of life were no significantly difference between control group and intervention group, the factors of diabetes specific quality of life consisted of diabetes treatment, psychological function, physiological function, and social relations. After nursing intervention, compared with control group, DSQL assessment of intervention group had better outcome in diabetes specific quality of life, and their results were statistically significant (p < 0.001). Therefore, group continuous nursing intervention significantly improve the diabetes specific quality of life of patients, which is also an important factor for treatment compliance and self-efficacy (Table 4).

Table 4. *Comparison of DSQL assessment before and after nursing intervention between two groups (Mean±SD).*

Item		Intervention group (n = 75)	Control group (n = 75)	t	P value
Treatment of diabetes	BN	10.4±2.4	10.3±2.6	0.266	0.791
	FN	16.5±2.7	10.0±2.2*	15.018	<0.001
	t	10.540	0.693	-	-
	P	<0.001	0.489	-	-
Psychological function	BN	23.3±2.9	22.5±3.2	1.336	0.184
	FN	30.6±4.3	23.8±3.8*	11.854	<0.001
	t	13.087	0.906	-	-
	P	<0.001	0.366	-	-
Physiological function	BN	43.6±5.1	44.2±4.8	0.779	0.438
	FN	51.3±6.0	45.1±4.3*	6.987	<0.001
	t	9.996	1.014	-	-
	P	<0.001	0.312	-	-
Social relations	BN	13.4±2.2	13.1±2.4	0.797	0.426
	FN	18.9±2.7	13.4±2.8*	13.185	<0.001
	t	9.861	0.719	-	-
	P	<0.001	0.473	-	-
Total assessment	BN	90.7±12.6	90.1±13.0	0.282	0.778
	FN	117.3±15.7	92.3±13.1*	10.588	<0.001
	t	17.847	1.032	-	-
	P	<0.001	0.304	-	-

BN = Before carrying out nursing intervention
FN = After carrying out nursing intervention
* indicates that the result is statistically significant compared with the intervention group (P < 0.05)

3.4. Clinical Nursing Satisfaction assessment of Two Groups of Patients

Base on the result of clinical nursing satisfaction assessment, the intervention group patients provided a great assessment of clinical nursing satisfaction (98.67%), which was significantly higher than that of control group (81.33%). Their results were statistically significant (P < 0.001). compared with control group, intervention group had most great satisfaction assessment in satisfaction assessment [58 (77.33%) vs 41 (54.67%)]. Therefore, group continuous nursing intervention improve clinical nursing satisfaction of patients as it meets patients' therapeutic needs, physiological needs and psychological needs, and maintains stable control of patients' blood glucose levels to the point that it is highly recognized by patients (Table 5).

Table 5. *Analysis of clinical nursing satisfaction assessment results of two groups of patients.*

item	Great satisfaction [n (%)]	Normal satisfaction [n (%)]	Dissatisfaction [n (%)]	Rate of satisfaction (%)
Intervention group (n = 75)	58 (77.33)	16 (21.33)	1 (1.33)	98.67
Control group (n = 75)	41 (54.67)*	20 (26.67)*	14 (18.67)*	81.33*
x^2	12.519			
P value	<0.001			

* indicates that the result is statistically significant compared with the intervention group (P < 0.05)

4. Discussion

In recent years, with the continuous improvement of China's economic level, changes in dietary structure and living habits have led to the increasing incidence of various chronic diseases year by year [12]. Diabetes is a life-long disease. Patients not only need to take drugs for long-term treatment, but also need to adhere to self-management in daily life to prevent the disease development and complications [13]. Since self-management of diabetes is characterized by many contents and long cycle, some patients fail to achieve scientific and continuous management, which leads to further development of the disease and occurrence of a variety of complications, which not only increases the difficulty of late treatment, but also endangers life safety [14]. Also, group continuous nursing intervention is a nursing intervention method, which connects hospitals, communities, families. This nursing intervention method has good continuity, and can provide professional subject diversified nursing intervention according to the multi-features of self-management of diabetes, taking into account the psychological, physiological and social needs of patients to the greatest extent. It meets the diversified nursing needs of patients in a variety of activities, in order to achieve the goal of helping patients to maintain and stabilize the control of blood glucose level [15].

In this study, we demonstrated that group continuous nursing intervention improved serum indicators, diabetes specific quality of life, and self-efficacy by change of the diabetic patient's lifestyle or improvement of the mental health of diabetic patients. To clarify the effect of group continuous nursing intervention, we performed a randomized controlled trial and analyze the result of serum indicators, diabetes specific quality of life, and self-efficacy. We show group continuous nursing intervention can improved serum indicators, diabetes specific quality of life, and self-efficacy for diabetic patients.

4.1. Analysis of the Influence of Group Continuity Nursing Intervention on Patients' Serum Level

As shown in Table 2, we found that group continuity nursing intervention can effectively help patients control their own blood glucose metabolism level scientifically and control the further development of the disease. Before intervention, intervention during once every 3 months interval measurement blood sugar levels (FBG, 2 h PG, HbA1c), visible from the blood glucose metabolism results: intervention in the first two group of patient's serum index (FBG, 2 h PG, HbA1c) is no significant difference ($P > 0.05$). In addition, after nursing intervention, intervention group patients of FBG, 2 h PG, HbA1c index were significantly lower than the control group, the result is statistical significance ($P < 0.05$).

For patients with diabetes, group continuous nursing intervention changed the thinking and behavior of patients with self-management, which can eliminate different emotions such as anxiety, depression and unscientific self-management behaviors. This nursing intervention in the whole process includes the establishment of mutual trust, master diabetes diet and exercise health nursing skills, blood glucose monitoring, complications prevention and management, daily medication, family support, self-management efficiency and other contents [16].

4.2. Analysis of the Effect of Group Continuity Nursing Intervention on Self-efficacy

As shown in Table 3, the result indicated that before nursing intervention, the GSES assessment of the two groups was not statistically significant ($P > 0.05$). In addition, the GSES assessment of the two groups was significantly improved after nursing intervention. On the other hand, the GSES assessment of the intervention group was significantly better than that of the control group ($P < 0.05$). we found that Group activities stimulate patients' self-management potential, improve patients' self-management cognitive level and sense of self-efficacy, and patients' intrinsic motivation by changing their daily behavior.

Several studies in related fields clearly demonstrated that group continuity nursing intervention takes the form of group activities to strengthen the interaction between patients, promote patients to share treatment, rehabilitation experience, but also encourage each other, that it can eliminate patients' anxiety, depression and other negative emotions [17, 18]. Likewise, group continuity nursing intervention uses various forms of educational activities to improve patients' self-management behavior, correct patients' wrong cognition of disease treatment and rehabilitation management, and help patients actively face disease treatment and rehabilitation guidance. In addition, it can also further enhance the patient's self-confidence, in order to achieve the purpose of improving the self-efficacy, it is the key factor to improve the patient's treatment compliance [19].

4.3. Analysis of the Influence of Group Continuity Nursing Intervention on Diabetes Specific Quality of Life

Since diabetes requires long-term drug treatment, patients are prone to negative emotions such as pessimism, anxiety and depression during treatment, and some patients may also have various complications or adverse reactions caused by drugs. Poor mental health results in poor treatment compliance and reluctance to contact with the outside world. These are not conducive to late treatment and rehabilitation nursing, may also seriously affect the diabetes specific quality of life of patients, can lead to rapid development of the patient's disease and lead to adverse outcomes [20, 21].

As shown in Table 4, group continuity nursing intervention significantly improves the effect of drug therapy, eliminates the adverse mood of patients, improves the physiological state, helps patients to actively, actively contact and enter social life, and significantly improves the diabetes specific quality of life of patients. Before intervention, there was no significant difference in the assessments of four aspects of diabetes

specific quality of life between the two groups ($P > 0.05$). After nursing intervention, the assessments of DSQL evaluation in the intervention group were significantly higher than those in the control group in four aspects, and the results were statistically significant ($P < 0.05$).

Base on the report, the domestic nursing intervention for diabetes mainly adopts "one-to-one" education and guidance, but this cannot allow patients to get more biofeedback help, nor is it conducive to patients to master the system of self-management methods [22]. members effectively arouse subjective initiative to increase the enthusiasm of patients to participate in activities by conducting various forms of fun activities in group continuous nursing intervention. Also, by the construction of interaction and communication platform between patients and medical staff, group continuous nursing intervention also can increase mutual trust and psychological support, help patients to break through psychological barriers, actively and actively contact and communicate with the society, so as to obtain more self-management experience, improve drug treatment compliance, improve the impact of the disease on the body, conducive to the control of disease development and prevention of complications [23, 24].

Therefore, group continuity nursing intervention mode has built a platform for diabetes patients to help, learn, communicate and promote each other, so that patients can actively communicate with fellow patients and medical staff in activities, observe and learn more self-management experience. Patients take scientific and diversified measures to correct their poor self-management style and achieve the purpose of stable control of blood glucose level [25]. In the activity, we explained and demonstrated the key points of diabetes self-management and the difficulties in patients' daily management, so as to improve patients' self-management efficiency and diabetes specific quality of life. The whole intervention activity designed a lot of wonderful interesting activities, not only stimulated the enthusiasm of patients to participate in the activity, more importantly, let patients master the self-management skills in the activity, enhance the sense of trust between nurses and patients at the same time, but also improve the patient's clinical nursing satisfaction. We believe that group continuity of care intervention model can significantly improve the serum biochemical indexes, GSES assessment, DSQL assessment and satisfaction of patients in self-management of diabetes mellitus, and has a high value of promotion and application.

References

[1] Sánchez Lechuga B, Carral San Laureano F. Apoyo tele-fónico, control glucémico y visitas a la unidad dediabetes en pacientes insulinizados. Endocrinol Diabetes Nutr (English ed.). 2017; 64: 328-9.

[2] Chimen M, Kennedy A, Nirantharakumar K, Pang TT, Andrews R, Narendran P. What are the health benefits of physical activity in type 1 diabetes mellitus? Aliterature review. Diabetologia. 2017; 55: 542e51.

[3] Quirk H, Blake H, Tennyson R, Randell TL, Glazebrook C. Physical activity interventions in children and young people with Type 1 diabetes mellitus: Asystematic review with meta-analysis. Diabet Med 2018; 31: 1163e73.

[4] International Diabetes Federation (IDF). The latest global diabetes map [OL]. 2019. (http: // www.diabetesatlas.org/).

[5] National Health Commission. Healthy China Action (2019-2030). The State Council. 2019.07.

[6] Yan Fang. Analysis of the effect of whole-process health education on blood glucose control, prognosis and complications in diabetes mellitus health management [J]. Journal of Clinical Medicine. 2017; 4 (70): 13738-13739.

[7] Ding D, Li D, Qin Y. The effect of group continuous care intervention on the self-care ability and mental toughness of patients with T2DM. Du Food & Medicine. 2019; (12): 154-155.

[8] Diabetes Society of Chinese Medical Association. Chinese Journal of Practical Internal Medicine. 2018; 38 (04): 34-86.

[9] Li DB, Wang F, Xia Y. The effect of continuous nursing intervention on disease outcome of elderly patients with diabetes. Journal of Zhejiang Clin. 2019; 21 (9): 1281-1282.

[10] Wu XJ, Geng G, Hou GY, Li Z. Effects of group continuous care on self-efficacy and quality of life in patients with diabetes. Hebei Medical Journal. 2018; 40 (21): 3338-3341.

[11] Li ZY, Liu Y, Zhai XQ, Cao ZG. Effects of group continuous care on self-efficacy and quality of life in patients with diabetes mellitus. Nursing Research. 2018; 32 (5): 795-798.

[12] Borries TM, Dunbar A. The impact of telemedicine on patient self-management processes and clinical outcomes for patients with types I or II diabetes mellitus in the United States: A scoping review. Diabetes Metab Syndr. 2019; 13: 1353-7.

[13] ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD: The Task Force for diabetes, pre-diabetes, and cardiovascular diseases of the European Society of Cardiology (ESC) and the Euro-pean Association for the Study of Diabetes (EASD). Eur Heart J. 2019; 41: 255-323.

[14] Chen XS, Wang Y, Sheng YQ, Fang SH, Mao ZW. Improving the self-management rate of patients with type 2 diabetes. Chinese Journal of Health Quality Management. 2017; 24 (F01): 6-11.

[15] Stopford R, Winkley K, Ismail K. Social support and glycemic control in type 2 diabetes: A systematic review of observational studies. Patient Educ Couns. 2013, 93 (3): 549-558.

[16] Liu JP. Effects of continuous nursing intervention on blood glucose control in community patients with type 2 diabetes mellitus. Cardiovascular Diseases of Integrated Traditional and Western Medicine. 2019; 7 (1): 190-191.

[17] Ru HY. Effects of continuous care on self-care ability and self-management ability of patients with diabetic nephropathy on hemodialysis. Journal of Applied Diabetes. 2019; 0 (3): 31-32.

[18] Steinsbekk A, Rygg LQ, Lisulo M, et al. Group based diabetes self- management education eompared to routine treatment for people with type 2 diabetes mellitus. A systematic: review with meta-analysis. BMC Health Serv Res. 2012; 12 (12): 213-232.

[19] Lu WJ, Yang H, Huang Y, Luo SY, et al. Evaluation of self-management program for diabetic patients in community. Chinese Journal of Chronic Disease Prevention and Control. 2018; 26 (3): 189-192.

[20] Alberti KG, Zimmet P. Epidemiology: Global burden of disease - where does diabetes mellltus fit in?. Nat Rev Endocrinol. 2013; 9 (5): 258-260.

[21] Zhu WF. Significance of continuous nursing intervention in patients with type 2 diabetes. Heilongjiang Journal of Traditional Chinese Medicine. 2019; 48 (4): 293-294.

[22] Zhang HX, Song Q, Chen CX. Journal of Health and Health. 2017; 33 (6): 810-813.

[23] Feng LH, Pan J. The effect of continuous care intervention on the quality of life of patients with diabetes. New World Diabetes. 2019; 22 (4): 172-173.

[24] Thorpe CT, Fabey LE, Johnson H, et al. Facilitating healthy coping in patients with diabetes: a systematic review. Diabetes Educ. 2013; 39 (1): 33-52.

[25] Teng Y, Liu ML, Zhang XM. The effect of hospital-family integrated continuous care on elderly patients with diabetes. Nursing Research. 2018; 32 (21): 3461-3462.