

Analysis of Sleep Quality and Oral Health Quality of Elderly Diabetic Patients Through Multi-Mode Health Education

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Abstract: Objective: To analyze the effects of multimodal health education on sleep quality and oral health quality of elderly patients with diabetes mellitus. **Methods:** From June 2020 to August 2021, 80 elderly patients with diabetes diagnosed and treated in our hospital were analyzed, and 40 cases were grouped by random lottery method. The basic group received routine health education, and the practice group received multi-mode health education, comparing the sleep quality level, oral health quality of life, and satisfaction of the two groups. The sleep quality and oral health quality of life scores of the practice group were lower than those of the basic group, and the satisfaction of the practice group was higher than that of the basic group, and the $P < 0.05$, with statistical significance. **Conclusion:** more. Model health education can effectively improve the sleep quality of elderly patients with diabetes and improve the quality of oral health and quality of life of patients, which is worthy of reference.

Keywords: Elderly Patients; Diabetes; Multi-Modal Health Education; Sleep Quality; Oral Health

Introduction

Diabetes is a common type of chronic disease that is more common in older people. With the gradual deepening of the aging of the population, the incidence of diabetes has further increased, which has been affected by physiological health, resulting in a significant decrease in the sleep quality of elderly diabetic patients and a serious impact on the physical and mental health of the body [1]. Over the years, with the continuous establishment of the - model, medical services have changed from simple disease diagnosis and treatment to psychological services and social services, paying more attention to the physical and mental health of elderly diabetic patients.- The routine nursing service model is often difficult to meet the growing nursing needs of patients at this stage. Multi-mode health education has emerged, multi-mode health education can ensure that patients can obtain more correct disease knowledge in a short period of time, so as to promote the continuous improvement of patients' cognitive level [2-3]. To this end, 80 elderly patients with diabetes were selected for this study, and the results are reported below.

1. Information and methods

1.1 Basic Information

From the analysis of 80 elderly patients with diabetes diagnosed and treated in our hospital, the study was carried out from June 2020 to August 2021, and they were grouped by random lottery method, $n=40$. There were 20 males and 20 females in the base group; the highest age was 79 years, the lowest age was 60 years, the age was mean (70.24 ± 1.36) years,

and the course of the disease ranged from 1 year to 10 years, the mean (5.78 ±1.02) years. In the practice group, there were 21 males and 19 females; the highest age was 81 years, the lowest was 61 years, the age was average (70.65±1.42 years), and the course of the disease ranged from 1 year to 12 years, the mean (5.94 ±1.16) years. The results of the comparison of the two sets of general data showed that the $P > 0.05$.

1.2 Methods

The basic group receives routine health education: oral health education is traditionally carried out for patients, timely answers to patients' and family questions, and homemade diabetes health education manuals are distributed to patients and their families, and patients are instructed to read on their own.

The practice group receives multi-modal health education: (1) Establish a health education team: a health education team composed of medical staff regularly conducts pictured and textual health education for patients through multimedia centralized publicity, and at the same time distributes health education brochures to patients to improve patients' interest in receiving publicity and education knowledge. (2) Application of insulin pen: Medical staff personally demonstrate the correct application method of insulin pen for patients, correct patients' wrong cognition and wrong use methods, etc., actively strengthen diet management education for patients, and explain the knowledge of disease diet for patients in the form of food and energy equivalent exchange, so that patients can more intuitively understand the correct way of eating different foods, and effectively improve patients' participation and sense of experience, and answer the questions raised by patients in detail. Explain the benefits of blood glucose monitoring to patients. (3) Health information files: Establish health data files, real-time monitoring and recording of specialized examinations and blood glucose changes, etc., so that patients can control blood sugar into daily goals that need to be completed, and record and improve patient disease treatment information. (4) Disease exchange meeting: Organize exchange meetings for diabetic patients every year, invite those with good blood glucose control and good self-management ability to share their experiences, mainly including medication, diet and exercise, etc., to further promote communication and exchange between patients and improve patient compliance.

1.3 Observation indicators

(1) The Pittsburgh Sleep Quality Evaluation Index was used to evaluate sleep quality, with a total score of 21 points, and the lower the score, the higher the patient's sleep quality. At the same time, the elderly oral health quality of life evaluation index was applied to evaluate the quality of oral health of the two groups, including 4 dimensions, and the 5-level scoring method was implemented to score, the score was 0-15 points, and the higher the score, the worse the oral quality of life. (2) Evaluate with a self-made satisfaction scale, including special satisfaction, basic satisfaction, and dissatisfaction.

1.4 Statistical analysis

The SPSS27.0 statistics tool is used as a research data processing tool, and the score data is tested with t to ($\bar{x} \pm s$) indicates that satisfaction data is tested by chi-square, expressed in composition ratios, and has statistical analytical significance: $P < 0.05$.

2. Results

2.1 Comparison of sleep quality and oral health quality of life between groups

The sleep quality score and oral health quality of life score of the practice group were significantly lower than those of the basic group, and the $P < 0.05$. As shown in Table 1.

Table 1 Comparison of sleep quality and oral health quality of life in the two groups ($\bar{x} \pm s$)

The group name	n	Sleep quality score (points)		Oral Health Quality of Life (points)	
		Before care	After care	Before care	After care
Practice Group	40	13.31±1.26	4.27±1.51	10.54±1.27	3.26±1.04
Base group	40	13.28±1.31	7.44±1.62	10.62±1.35	5.36±1.17
t	-	0.104	9.052	0.272	8.484
P	-	0.917	0.000	0.785	0.000

2.2 Compare the satisfaction levels between groups

The satisfaction of nursing services in the practice group was significantly higher than that in the basic group, with a $P < 0.05$. As shown in Table 2.

Table 2 Comparison of satisfaction levels between the two groups [n(%)]

The group name	Number of examples	Particularly satisfied	Basically difficult	dissatisfied	Total satisfaction
Practice Group	40	20 (50.00)	17 (42.50)	3 (7.50)	37 (92.50)
Base group	40	16 (40.00)	14 (35.00)	10 (25.00)	30 (75.00)
χ^2	-	-	-	-	4.500
P	-	-	-	-	0.033

3. Discussions

Diabetes is a lifelong disease type, high incidence in the elderly, its blood glucose compliance rate is low, low control rate, low cholesterol, it is very easy to cause systemic inflammatory response and local inflammation, will have a serious impact on the physical and mental health of patients, reduce the quality of life and sleep quality of patients [4]. Because most elderly patients have a relatively low awareness of diabetic disease knowledge, it is very easy to cause them to not comply with medical drugs due to the influence of various factors, which adversely affects the treatment effect of the disease. Effective interventions need to be actively pursued to further improve the overall quality of interventions [5].

Multi-mode health education can take patients as a nursing center, fully take into account physiological functions, patient differences, training environment and other factors, in the process of targeted health education for patients, through multimedia continuity interaction and other diversified modes, health education for patients, improve patients' disease knowledge awareness, improve patient cognitive level, further promote patients to actively participate in the health management process in daily life, let patients self-correct poor lifestyle, improve patient compliance with medical drugs, Effectively improve the effect of blood glucose control in patients and reduce the risk of complications. Carrying out multi-mode health education can effectively improve patients' daily self-management ability and learning ability, and it is necessary to fully apply the knowledge learned in daily life, improve patients' enthusiasm for participation, and effectively control patients' disease progression [6]. The results of this study show that the sleep quality score and oral health quality of life score of the practice group were significantly lower than those of the basic group, with a $P < 0.05$; the satisfaction of nursing services in the practice group was significantly higher than that of the basic group, with a $P < 0.05$.

In summary, the implementation of multi-mode health education for elderly diabetic patients can effectively improve the sleep quality and oral health quality of patients, so that patients' satisfaction with nursing services is significantly improved, which is suitable for promotion.

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