

Original Article

Implementation and effect analysis of mental health nursing intervention in patients with upper gastrointestinal bleeding complicated with depression

Weili Yang¹, Zebo Jia²

¹Department of Psychology, School of Public Health, Shaanxi University of Chinese Medicine, Xixian New Area, Shaanxi, China; ²Department of Gastroenterology, Xianyang Central Hospital, Xianyang, Shaanxi, China

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Abstract: Objective: This study aimed to analyze the effect of mental health nursing intervention in patients with upper gastrointestinal bleeding complicated with depression. Methods: Eighty-five patients with upper gastrointestinal bleeding and depression in our hospital from January 2018 to December 2018 were selected as subjects of study for retrospective analysis and divided into two groups. There were 42 patients in the control group who received routine nursing intervention and 43 patients in the observation group who received mental health nursing intervention in addition to routine nursing. Comparison of the nursing effect, depressive emotions, nursing compliance, quality of life, nursing satisfaction, complication incidence and self-management ability between the two groups was performed. Results: (1) The Hamilton Depression Scale (HAMD) scores of the observation group were lower than those of the control group after intervention ($P<0.05$). (2) There were statistical differences in number of bleeds, hemostasis time, rebleeding rate and length of stay between the two groups ($P<0.05$). (3) The outcomes in aspects of emotional control, appropriate exercise, reasonable diet, smoking and drinking cessation and compliance of medicine of the observation group was higher than that of the control group ($P<0.05$). (4) The scores for behavioral self-management, cognitive self-management and environmental self-management of the observation group were higher than those of the control group after intervention ($P<0.05$). (5) The scores for physical activity, vitality, pain, sleep, social life and emotional reaction of the observation group were lower than those of the control group after intervention ($P<0.05$). (6) The complication incidence was 9.30% in the observation group and 26.19% in the control group ($P<0.05$). (7) The nursing satisfaction was 90.70% in the observation group and 73.81% in the control group ($P<0.05$). Conclusion: The application of mental health care nursing intervention for patients with upper gastrointestinal bleeding complicated with depression could obviously alleviate the depressive emotions, enhance the nursing compliance, improve the self-management ability and quality of life and enhance the nursing satisfaction; which makes it worthy of promotion and application.

Keywords: Upper gastrointestinal bleeding, depression, mental nursing intervention, effect

Introduction

Upper gastrointestinal bleeding is a common emergency disease of the digestive system, specifically referring to the partial bleeding of the gastrointestinal tract above the esophagus, stomach, upper jejunum, gallbladder-pancreas and ligament of Treitz [1]. This disease occurs with high incidence in liver cirrhosis patients during the decompensated period. Patients may have the clinical manifestations of peripheral circulatory failure, such as adynamia, dizziness and haematemesis. Some patients with a

large amount of bleeding may have the clinical manifestations of haematemesis and bloody stool at the same time [2, 3]. The amount of bleeding in the upper gastrointestinal tract will exceed 500 ml within a short time, and patients with severe upper gastrointestinal bleeding may be complicated with hepatic failure and hemorrhagic shock. If patients are not treated in time, their life and safety will be directly threatened [4]. As a main complication of liver cirrhosis, upper gastrointestinal bleeding mainly occurs in case of portal hypertension caused by liver cirrhosis, which increases the resis-

tance of blood returning to the heart from digestive system and spleen when it flows through the liver, thus leading to abdominal wall varicosis and esophagogastric varices [5]. Upper gastrointestinal bleeding is characterized by fast onset, dangerous disease state and rapid progress, with a death rate of about 10%. So clinical treatment requires faster speed and higher quality [6]. Due to the sudden onset of upper gastrointestinal bleeding, most patients cannot understand it immediately. Besides, the severity of this disease is very high, so patients are extremely worried about their health and safety. Hence, they may easily suffer from depression, anxiety, fear and other negative emotions [7]. In clinical practice, more than half of patients with upper gastrointestinal bleeding were found to have depression [8]. The existence of depressive symptoms will affect the mental state of patients during treatment, with lower degree of adaptability, lower pain threshold and stronger painful feelings, which influences the effect of clinical treatment in different degrees [9].

Previous nursing intervention for patients with upper gastrointestinal bleeding mainly focused on disease nursing without sufficient emphasis on patients' mental state. This study emphasized the mental health care nursing intervention in patients with upper gastrointestinal bleeding complicated with depression, in addition to routine nursing, so as to meet the demands of patients for physical and mental state improvement and achieve an ideal nursing effect.

Materials and methods

Materials

Eighty-five patients with upper gastrointestinal bleeding complicated with depression in our hospital from January 2018 to December 2018 were selected as subjects of study for retrospective analysis and divided into two groups. There were 42 patients in the control group, including 25 males and 17 females, with the average age of 29-58 years and the amount of bleeding of 280-630 ml; and there were 43 patients in the observation group, including 24 males and 19 females, with the average age of 30-60 years and the amount of bleeding of 290-650 ml. Upper gastrointestinal bleeding is generally induced by other diseases of the

upper gastrointestinal tract, liver cirrhosis and upper gastrointestinal ulcers. (1) Inclusion criteria: This study included patients in conformity with the diagnostic criteria of upper gastrointestinal bleeding [10]; those who were definitely diagnosed through gastroscopy; those whose Hamilton Depression Scale (HAMD) scores with 8 or above; and those who signed Informed Consent Form. In addition, this study was approved by Hospital Ethics Committee of Xianyang Central Hospital. (2) Exclusion criteria: This study excluded patients diagnosed with upper gastrointestinal bleeding, who were not complicated with depression; those with mental disorders; those with cognition impairment; those with serious dysfunction of the heart, liver, kidney and lung; and those with excessively low degree of adaptability to nursing.

Methods

The patients of the control group received routine nursing, mainly following the doctor's advice to complete the basic nursing services, with specific nursing content including inspections, assessments, observation of physical signs, and diet guidance. (1) As the incidence of upper gastrointestinal bleeding is high in conditions of cold and clear temperature variation, nursing care was especially provided from 17:00 to 0:00 and from 0:00 to 8:00, during which highly qualified nurses were allocated. (2) All patients were graded for risk level, and patients with liver function Child-pugh Grade of C Grade [11], a large amount of bleeding, complicated with hepatic encephalopathy and rebleeding were regarded as high-risk groups, which were provided with highly qualified nursing personnel to increase the number of inspections and provide key monitoring and care management. (3) The changes of vital signs in patients were observed closely. If patients had awareness of defecation, hyperactive bowel sounds and abdominal discomfort, measures were taken to prevent hematochezia. If patients had symptoms of nausea and vomiting and throat discomfort, they were closely observed to avoid rebleeding. Two venous channels were established for the above-mentioned patients to be ready for fluid infusion and blood transfusion. (4) Food preferences and habits of patients were considered to formulate individualized diets according to dieticians' sugges-

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tions. Patients were informed in advance that a reasonable diet was of great significance to disease control. Smoking and drinking were forbidden. Additionally, hard food and spicy and sour food were prohibited. A liquid diet was provided to patients for 2-3 days after hemostasis to ensure the supplementation of protein, energy and vitamins.

The patients of the observation group received mental health care nursing intervention in addition to that of routine nursing.

(1) Establishment of harmonious nurse-patient relationships: Nurses communicated with patients in the ward both actively and patiently. In the nursing process, nurses talked more with patients, listened to patients more, did more and thought more for patients. Besides, nurses reminded patients of important details before examination, explained things before treatment, comforted patients in case of uncomfortable symptoms, thanked the patients in case of good cooperation, apologized for any cases of misoperation, blessed patients before festivals and saw them off at discharge; ensured that patients received high-quality and comfortable nursing service during the whole period of hospitalization.

(2) Supportive mental nursing: Sufficient mental comfort was provided for patients to eliminate their unhealthy mentality to the maximum extent. Patients were offered health care education in the form of pictures and brochures for their better understanding so that they could learn more about the occurrence, progress, treatment and prognosis of disease and have a correct understanding of the disease to eliminate their own unhealthy mental process and face the disease and treatment actively. Patients with low mood were provided with active comfort and persuasions; a detailed explanation was provided to patients with doubts to ease their minds; and patients with a pessimistic mood were provided with extra care. Furthermore, the family and social care and support was encouraged to bring a higher sense of safety to patients mentally. Nurses also explained to patients' family members about the need and importance of treatment and nursing implementation. Besides, nurses encouraged, understood and accompanied patients in a holistic way and provided emotional support to patients.

(3) Cognitive and behavioral interventions: The formulation of the nursing scheme was based on the evaluation of a patients' disease state. Nurses introduced similar cases that had good treatment results in patients with the same type of disease, the adverse influence of persistent unhealthy emotions and the promotional effects of good attitude on treatment results. Patients were encouraged to correct their level of cognition, fully explore their potential and stimulated to improve their motivation through continuous education and explanation. Patients were not only the recipients of nursing service, but also participated in their own care, thus realizing the continuous improvement of self-management ability.

Observation targets

(1) Nursing effects: The two groups were compared in number of bleeds, hemostasis time, rebleeding rate during hospitalization and length of stay after nursing.

(2) Depressive emotions: The depressive emotions of the two groups was evaluated through HAMD [12] before nursing (at admission) and after nursing (at discharge). There were 17 items in this scale, which were divided into scores of 0, 1, 2 and 3 according to the degree of severity. A total score of over 24 points represented severe depression, those of over 17 were scored as mild and moderate depression and those of less than 7 points were scored as no depression.

(3) Nursing compliance: Five aspects of compliance were evaluated in the two groups, including emotional control, appropriate exercise, reasonable diet, smoking and drinking cessation and compliance with medicine. If patients spent more than 70% of their time in compliance with each aspect, this was considered as compliance; and if patients spent less than 70% of their time in each aspect, it was considered as noncompliance.

(4) Self-management ability: The self-management ability of the two groups was evaluated through Rating Scale of Health Self-Management Skill for Adults (AHSMSRS) [13] after nursing (at discharge), including behavioral self-management with 13 items, cognitive self-management with 13 items and environmental self-management with 12 items. The scoring

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Table 1. Comparison of general data between the observation group and control group ($\bar{x} \pm s$)/[n (%)]

Data		Observation group (n=43)	Control group (n=42)	t/X ²	P
Gender	Male	24 (55.81)	25 (59.52)	0.120	0.729
	Female	19 (44.19)	17 (40.48)		
Age (years old)		45.86±10.19	44.69±10.32	0.526	0.600
Amount of bleeding (ml)		480.69±120.58	470.34±118.92	0.398	0.691
Induced diseases	Liver cirrhosis	17 (39.53)	15 (35.71)	0.526	0.318
	Upper gastrointestinal ulcer	16 (37.21)	15 (35.71)		
	Other diseases of upper gastrointestinal tract	10 (23.26)	12 (28.57)		

Table 2. Comparison of HAMD scores for changes of depressive emotions between observation group and control group ($\bar{x} \pm s$)

Group	Number of cases	Before intervention	After intervention	t	P
Observation group	43	20.16±3.38	8.59±2.51	18.021	0.000
Control group	42	20.65±3.59	13.52±3.29	9.489	0.000
t		0.648	7.779		
P		0.519	0.000		

rate of satisfaction + rate of generality.

Statistical analysis

SPSS 22.0 was used for statistical analysis. The measurement data were represented as mean ± standard deviation. The independent-sample t test was used for the comparison of results between and within groups.

method of 5 different grades was applied to each item, denoted by scores of 1-5. The total scores were 65, 65 and 60 respectively. Higher the scores indicated a better self-management ability.

(5) Quality of life: The quality of life of the two groups was evaluated through Nottingham Health Profile (NHP) [14] before nursing (at admission) and after nursing (at discharge); including physical activity, vitality, pain, sleep, social life and emotional reaction, with 100 points for each item. Higher the scores indicated a worse quality of life.

(6) Complications: The two groups were compared in complications such as, incidence of constipation, hepatic encephalopathy and infection.

(7) Nursing satisfaction: The survey of nursing satisfaction was conducted with the patient's own feelings as the standard. The survey content included various aspects of nursing attitude, establishment of the nurse-patient relationship, implementation of nursing measures, and nursing content. The total score is 10 points, and the score of 9-10 points represented satisfaction, 6-8 points was general satisfaction, and less than 6 points was dissatisfaction. Calculation method: nursing satisfaction =

Paired t test was used for data analysis within groups before and after treatment. The enumeration data were represented as [n (%)]. Chi-squared test was used for the comparison of results between groups and within group. $P < 0.05$ indicated that the difference had statistical significance.

Results

Comparison of general data between the observation group and the control group

There was no obvious difference in gender ratio, average age, average amount of bleeding and proportion of induced diseases between the two groups ($P > 0.05$) (Table 1).

Comparison of changes in depressive emotions between the observation group and the control group

There was little difference in HAMD scores between the groups before nursing ($P > 0.05$). The HAMD scores of the two groups were reduced after nursing in comparison with those before nursing ($P < 0.05$). The HAMD scores of the observation group were much lower than those of the control group after nursing ($P < 0.05$) (Table 2).

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Table 3. Comparison of nursing effects between the observation group and control group ($\bar{x} \pm s$)

Group	Number of cases	Number of bleeds (times)	Hemostasis time (min)	Rebleeding rate during hospital stay (case, %)	Length of stay (day)
Observation group	43	3.50±0.50	2.28±1.35	2 (4.65)	6.85±2.16
Control group	42	4.50±0.50	4.95±1.51	8 (19.05)	9.67±2.34
t/X ²		9.219	8.599	4.242	5.775
P		0.000	0.000	0.039	0.000

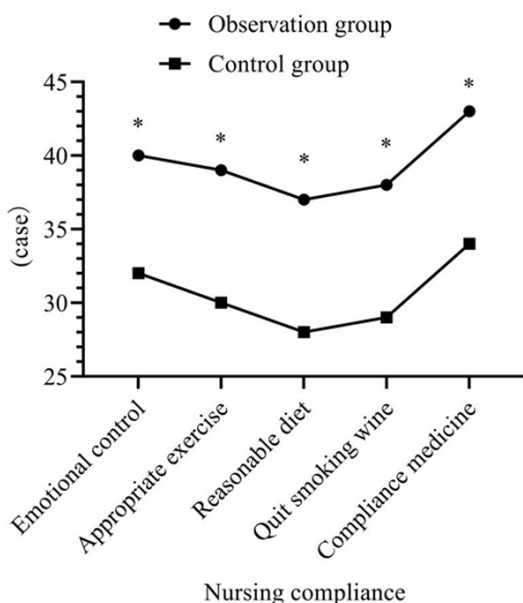


Figure 1. Comparison of nursing compliance between observation group and control group. The number of patients showing compliance in emotional control, appropriate exercise, reasonable diet, smoking and drinking cessation and compliance with medicine in the observation group was much higher than that of patients in the control group ($P < 0.05$). * means $P < 0.05$ with regard to the comparison of the same indicator between two groups.

Comparison of nursing effect between the observation group and the control group

The number of bleeds in the observation group was less than that in the control group. The hemostasis time of the observation group was shorter than that of the control group. The rebleeding rate of the observation group was lower than that of the control group during hospitalization. The length of stay in the observation group was shorter than that in the control group ($P < 0.05$) (Table 3).

Comparison of nursing compliance between the observation group and the control group

There were 40 patients in compliance with emotional control in the observation group,

accounting for 93.03%, and there were 32 patients in compliance of their emotional control in the control group, accounting for 76.19%. There were 39 patients in compliance with the appropriate amount of exercise in the observation group, accounting for 90.70%, and there were 30 patients in compliance for appropriate exercise in the control group, accounting for 71.43%. There were 37 patients in compliance with having a reasonable diet in the observation group, accounting for 86.05%, and there were 28 patients in compliance with a reasonable diet in the control group, accounting for 66.67%. There were 38 patients in compliance with smoking and drinking cessation in the observation group, accounting for 88.37%, and there were 29 patients in compliance with smoking and drinking cessation in the control group, accounting for 69.05%. There were 43 patients in compliance with medications in the observation group, accounting for 100.00%, and there were 34 patients in compliance with medication in the control group, accounting for 80.95%. The compliance in all aspects of emotional control, appropriate exercise, reasonable diet, smoking and drinking cessation and compliance with medicine in the observation group was much higher than that of the control group ($\chi^2 = 4.647, 5.163, 4.435, 4.753, 9.041, P = 0.031, 0.023, 0.035, 0.029, 0.003$) (Figure 1).

Comparison of self-management ability between the observation group and the control group

As for the evaluation of self-management ability before nursing, the scores for behavioral self-management were (32.16±4.38) in the observation group and (31.56±4.29) in the control group. The scores for cognitive self-management were (30.58±4.15) in the observation group and (31.23±5.07) in the control group. The scores for environmental self-management were (32.25±4.76) in the observation group and (32.51±4.79) in the control group.

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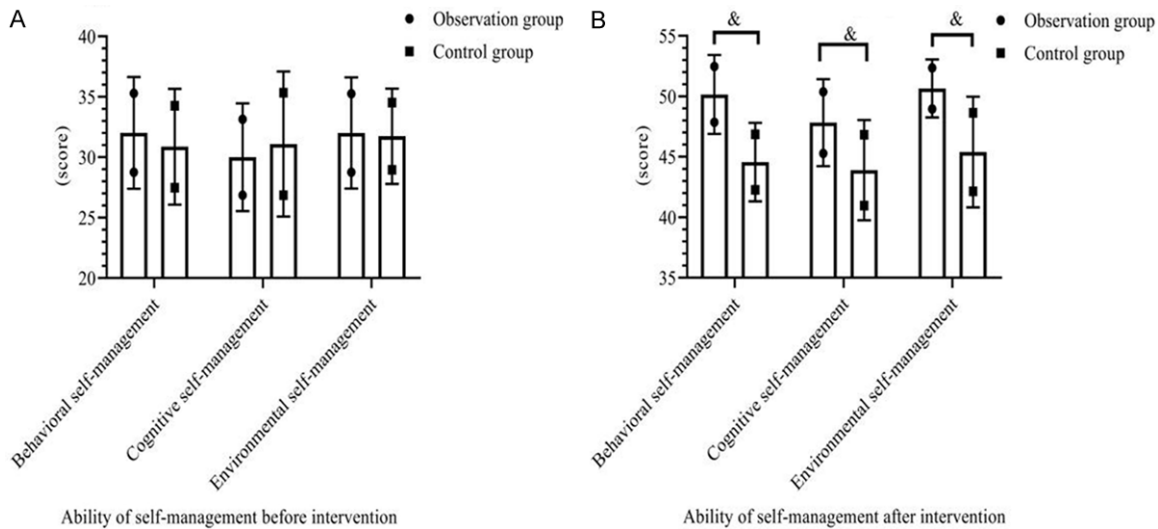


Figure 2. Comparison of self-management ability between the observation group and control group. There was little difference in scores for behavioral self-management, cognitive self-management and environmental self-management of the two groups before intervention ($P>0.05$). The scores for behavioral self-management, cognitive self-management and environmental self-management of the observation group were much higher than those of control group after intervention ($P<0.05$). & means $P<0.05$ with regard to the comparison of the same indicator between two groups.

Table 4. Comparison of quality of life before and after nursing between observation group and control group ($\bar{x} \pm s$, scores)

Group	Time	Physical activity	Vitality	Pain	Social life	Sleep	Emotional reaction
Observation group (n=43)	Before intervention	75.26±6.39	74.19±5.86	75.13±5.94	76.31±4.98	75.08±5.23	75.49±5.46
	After intervention	42.31±3.36*	40.78±4.05*	41.69±5.21*	40.45±5.26*	41.75±4.49*	43.31±5.02*
Control group (n=42)	Before intervention	74.49±6.32	75.45±6.02	74.89±5.31	75.17±5.03	74.95±5.18	74.37±5.04
	After intervention	47.84±4.62*	45.85±5.03*	46.95±5.28*	45.49±5.21*	47.84±5.23*	48.75±5.91*
t		6.322	5.124	4.623	4.437	5.765	4.578
P		0.000	0.000	0.000	0.000	0.000	0.000

Notes: t and p refer to the values of comparative statistics in two groups after treatment, with * $P<0.05$ in comparison with that in group before intervention.

After nursing, the scores for behavioral self-management were (49.68±5.78) in the observation group and (44.63±4.28) in the control group. The scores for cognitive self-management were (48.37±5.62) in the observation group and (43.65±5.19) in the control group. The scores for environmental self-management were (50.15±4.95) in the observation group and (45.37±4.26) in the control group.

There was little difference in scores for behavioral self-management, cognitive self-management and environmental self-management between the two groups before nursing ($P>0.05$). The above scores of the observation group were higher than those of the control group

after nursing ($t=4.569, 4.020, 4.767, P=0.000, 0.000, 0.000$) (Figure 2).

Comparison of quality of life between the observation group and the control group

There was little difference in scores for physical activity, vitality, pain, sleep, social life and emotional reaction between the two groups before nursing ($P>0.05$). The scores for all above indicators in both groups were significantly reduced after nursing in comparison compared with those before nursing ($P<0.05$). The scores for all indicators of the observation group were much lower than those of the control group after nursing ($P<0.05$) (Table 4).

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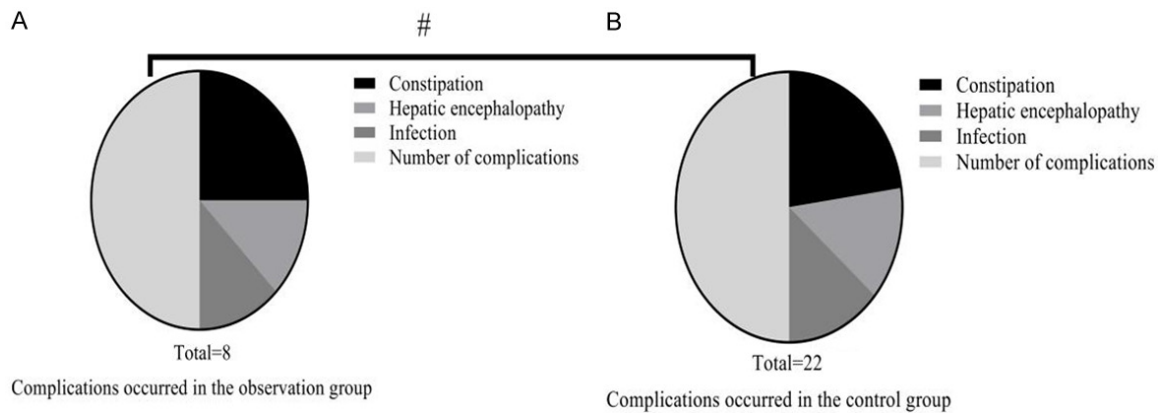


Figure 3. Comparison of complication incidence between the observation group and control group. There was little difference in the number of patients suffering from constipation, hepatic encephalopathy and infection between the two groups ($P>0.05$). The number of patients suffering from complications in the observation group was much lower than that of patients in control group ($P<0.05$). # means $P<0.05$ when the number of patients suffering from complications was compared between two groups.

Comparison of the complications of incidence between the observation group and control group

There were 2 patients who suffered from constipation in the observation group, accounting for 4.65%, and 5 patients who suffered from constipation in the control group, accounting for 11.90%. There was 1 patient who suffered from hepatic encephalopathy in the observation group, accounting for 2.33%, and 3 patients who suffered from hepatic encephalopathy in the control group, accounting for 7.14%. There was 1 patient who suffered from an infection in the observation group, accounting for 2.33%, and 3 patients who suffered from an infection in the control group, accounting for 7.14%. There were 4 patients who suffered from complications in the observation group, with a complication incidence of 9.30%, and 11 patients who suffered from complications in the control group, with a complication incidence of 26.19%. The data reported above indicated that there was an obvious difference in incidences of complications between the two groups ($X^2=4.170$, $P=0.041$) (Figure 3).

Comparison of nursing satisfaction between the observation group and the control group

There were 18 patients who were satisfied with the nursing implementation in the observation group, accounting for 41.86%, and 14 patients who were satisfied with the nursing implementation in the control group, accounting for

33.33%. There were 21 patients felt generally satisfied about the nursing implementation in the observation group, accounting for 48.84%, and 17 patients who felt generally satisfied about the nursing implementation in the control group, accounting for 40.48%. There were 4 patients who were dissatisfied with the nursing implementation in the observation group, accounting for 9.30%, and 11 patients who were dissatisfied with the nursing implementation in the control group, accounting for 26.19%. The nursing satisfaction was 90.70% in the observation group and 73.81% in the control group, which indicated that the difference had statistical significance ($X^2=4.170$, $P=0.041$) (Figure 4).

Discussion

If the portal hypertension of liver cirrhosis patients exceeds 1.96 kPa in advanced stagea, the blood returning to the heart from digestive system and spleen will be blocked when it flows through the liver, and esophagogastric varices will accordingly occur, which is an important reason for the occurrence of upper gastrointestinal bleeding [15]. Besides, the body will create collateral circulation of abdominal wall varicosis and varicosis of hemorrhoidal vein, which leads to angiorrhaxis and thus causes bleeding [16].

Upper gastrointestinal bleeding, characterized by fast onset and rapid progress, is one of the key reasons for the death of liver cirrhosis

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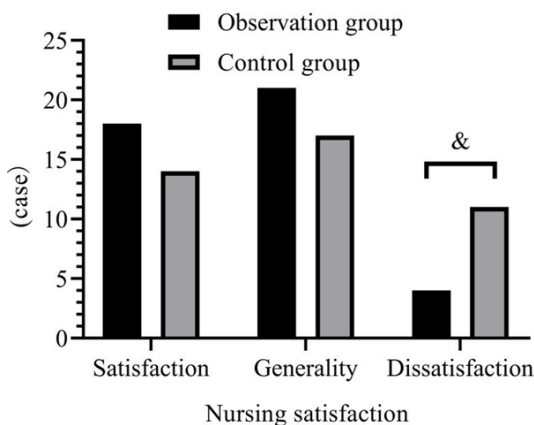


Figure 4. Comparison of nursing satisfaction between observation group and control group. There was little difference in the number of patients who were satisfied with and felt generally satisfied about the nursing service in the two groups ($P>0.05$). The number of patients who were dissatisfied with the nursing service in observation group was much lower than that of patients in control group ($P<0.05$). & means $P<0.05$ when the number of patients who were dissatisfied with nursing implementation was compared between two groups.

patients. These patients are prone to high anxiety, severe nervousness, fear and other negative emotions when they have a sudden massive hemorrhage. Some patients with low pain and fear tolerance levels even have a feeling of impending death and a variety of serious unhealthy emotions, which greatly affects their mental state, treatment compliance and quality of life [17, 18]. Furthermore, the persistent existence of serious unhealthy emotions will affect the recovery of patients, prolong the length of stay, waste human and material resources in aspect of medical treatment and nursing and thus increase the medical burden of patients [19].

In this study, the patients in the observation group received mental health nursing intervention. Mental health nursing aims to help patients keep an ideal physical and mental state during nursing implementation to the maximum extent by actively influencing the mental state of patients through different approaches and methods. Its aim is to relieve or even eliminate the unhealthy emotions of patients, enhance their confidence in treatment and improve the compliance with nursing implementation through language, temperament, attitude, expression and behavior of nurses so as to achieve better clinical prognosis [20]. As shown in

this study, the HAMD scores of the observation group were much lower than those of the control group after nursing, and the nursing compliance of the observation group was much higher than that of the control group after nursing ($P<0.05$). In addition, the number of bleeds in the observation group was less than that in the control group; the hemostasis time and length of stay in the observation group were shorter than those in the control group; and the rebleeding rate of the observation group was lower than that of the control group during hospital stay ($P<0.05$). This implied that the application of mental health nursing intervention to patients with upper gastrointestinal bleeding complicated with depression could relieve the depressive emotions to a maximum extent, achieve better nursing effects, realize a faster hemostasis, reduce the number of bleeds, shorten the length of stay and effectively control the rebleeding rate. It was found through analysis that the implementation of mental health nursing interventions changed the behavior and cognition level of patients and enhanced the nursing compliance of patients, which not only guaranteed an effective enforcement of all nursing measures, but also ensured the nursing effects in a better way [21].

During the implementation of mental health nursing intervention, nurses are required to closely observe and understand the subjective and objective factors of patients' mental behavior and carry out the necessary nursing care based on this, to create a good environment in conformity with individual demands [22]. Moreover, nurses are required to implement mental health nursing to reasonably deal with the negative feedback of patients and keep a good psychological perspective themselves [23]. In this study, the scores for behavioral self-management, cognitive self-management and environmental self-management of the observation group were higher than those of the control group after nursing intervention; the scores for physical activity, vitality, pain, sleep, social life and emotional reaction of the observation group were much lower than those of the control group after nursing intervention; the complication incidence of the observation group was lower than that of the control group after nursing intervention; and the nursing satisfaction of the observation group was higher than that of the control group after nursing

intervention ($P < 0.05$). Wu KH et al. [24] studied the implementation of mental health nursing in patients with upper gastrointestinal bleeding and found that the quality of life of patients receiving mental health nursing increased more obviously in comparison with that of patients receiving routine nursing. Chapman W et al. [25] applied mental health care nursing intervention to patients who were bleeding complicated with depression and indicated that the complication incidence reduced greatly and the satisfaction degree increased distinctly during hospitalization. This implied that the application of mental health nursing intervention to patients with upper gastrointestinal bleeding complicated with depression could enhance the self-management ability and self-nursing ability of patients, and that as a result the self-care ability of patients can be improved even without nurses. Furthermore, patients could find the solutions to their adverse situations in time and seek the help of nurses, so the complication incidence was clearly reduced, the quality of life was improved distinctly and the nursing satisfaction was enhanced greatly [26].

In conclusion, the application of mental health nursing intervention to patients with upper gastrointestinal bleeding complicated with depression could obviously alleviate the depressive emotions, enhance the nursing compliance, improve the self-management ability and quality of life and enhance the nursing satisfaction, which is worthy of promotion and application. This study was a retrospective study, so the subjects of study were not selected in advance. In addition, due to the small number of research subjects, the analysis of the research results may not be comprehensive and representative enough. Therefore, the prospective studies will be with larger sample sizes and various aspects will be stressed in future studies so as to obtain more scientific and representative conclusions and provide more guidance for the clinical nursing of patients with upper gastrointestinal bleeding complicated with depression.

Disclosure of conflict of interest

None.

Address correspondence to: Zebo Jia, Department of Gastroenterology, Xianyang Central Hospital, No. 78, Renmin East Road, Weicheng District, Xianyang

712000, Shaanxi, China. Tel: +86-029-33288692; E-mail: jkkm6@163.com

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