# Humanized Nursing Mode Can Reduce the Unhealthy Emotion, Shorten the First-Aid Time and Improve the Successful Rescue Rate in Patients with Acute Myocardial Infarction

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**Abstract:**

**Objective:** To explore the influence of humanized nursing mode on unhealthy emotion, first-aid time and successful rescue rate in patients with acute myocardial infarction (AMI).

**Methods:** Patients with AMI admitted to our hospital from December 2017 to June 2019 were randomly divided into control group (CG) and research group (RG). In CG, patients received routine nursing mode, while patients in RG received humanized nursing mode. The clinical emergency treatment, unhealthy emotion changes, nursing satisfaction and successful rescue rate of patients were observed in the two groups.

**Results:** The patients in RG showed obvious clinical advantages in terms of emergency rescue time, admission time and hospitalization time, and the duration of each index was significantly shorter than that of CG. The score of doctor-nurse cooperation in RG was significantly higher than that in CG, and the successful rescue rate was also significantly higher than that in CG. Before nursing, there was no significant difference in unhealthy emotion scores between the two groups. After nursing, the unhealthy emotion scores in RG were significantly lower than those in CG. After nursing, the incidence of complications in RG was significantly lower than that in CG. The total nursing satisfaction of patients in RG was significantly higher than that in CG.

**Conclusion:** Humanized nursing mode can reduce the unhealthy emotion, shorten the first-aid time and improve the successful rescue rate in patients with AMI.

**Keywords**: humanized nursing, acute myocardial infarction, first-aid time, successful rescue rate, unhealthy emotion

## Introduction

Acute myocardial infarction (AMI) refers to the syndrome of myocardial ischemia, anoxia and necrosis caused by coronary artery insufficiency or blood flow interruption (Reed et al.,2017). Among the patients with critically ill in cardiology department, AMI is a high incidence disease and belongs to coronary heart disease(Zhang et al.,2016). The main clinical symptoms of AMI include profuse sweating, severe pain in the chest region, and often suffocation(Castro et al.,2018). Studies have proved that most myocardial infarction is caused by unstable atherosclerotic plaque rupture, followed by hemorrhage and intraluminal thrombosis, which occludes the lumen. In a few cases, hemorrhage or continuous vasospasm in or under the atherosclerotic plaque can also completely occlude the coronary artery(Khaled et al.,2020). Once the patient is ill, it is necessary to rescue the patient immediately so as to recover the myocardial function of the patient faster. Only in this way can the myocardial blood flow perfusion ability of the patient be recovered, thus effectively avoiding serious consequences such as death to the patient(Allonneau et al.,2017).

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The basic cause of this disease is coronary atherosclerosis. There are hundreds of risk factors. Among them, age, gender and genetic factors cannot be changed, but controllable factors include lipemia(Yuanbin et al.,2012), hypertension(Pedrinelli et al.,2012), diabetes(Rawshani et al.,2018), smoking(Patel et al.,2019), satiety(Saraiva et al.,2014) and mental stress.(Mohamed et al.,2019). Emotional agitation can make sympathetic nerve in a highly excited state, and catecholamine secretion increases in the body, resulting in faster heart rate, higher blood pressure and increased oxygen consumption, thus causing coronary artery spasm to induce angina pectoris or AMI(Zhou et al.,2019). AMI, as a major negative event threatening human life and a strong stimulus source, can cause a strong stress response in the body. The neuroendocrine basis of stress response is the excitation of sympathetic nerve and the increase of adrenal medulla secretion(Papanikolaou et al.,2014). Anxiety is a risk factor for sudden cardiac death, and severe depressive reaction can cause death of patients(AbuRuz and Masa'Deh,2017). Patients with myocardial infarction have different psychological characteristics in different periods. The psychological characteristics of patients in acute stage are strong psychological reaction, which is manifested by emotional tension, panic, anxiety, non-compliance with treatment and other emotions. Therefore, AMI patients have serious psychological problems, and these adverse emotions will affect the recovery of the disease(Hammadah et al.,2018). Therefore, it is very important to implement humanized nursing measures to meet the needs of patients.

Humanized nursing is an overall nursing mode that takes patients as the center, regards patients as an open organic whole composed of biological, psychological and social factors, and aims to meet the physical and mental needs of patients and restore health(Beltrán,2016). Humanized nursing is the four basic concepts of nursing: human, health, environment and nursing. Humanized nursing is developed from "human care" nursing mode(Wu and Volker,2012). First of all, nurses must have a scientific understanding of human nature and give patients humanistic care, which can be divided into psychosocial socials and caring behaviors. Psychological socials include sympathy, sincerity, respect, treating the patient as a relative and other attitude and emotional expression. Caring behaviors include professional behaviors, satisfaction of needs, eye contact, listening, mild tone, expression and touch skills(Alvares et al.,2018; de et al.,2015). "Care" is what one thinks. "Nursing" performs what is thought, which is a concrete manifestation of thought and action. In recent years, the concept of humanized nursing has been widely used in clinical(Beltrán,2015).

In this study, the influence of this mode on the unhealthy emotion of patients, first-aid time, successful rescue rate and other factors were observed to evaluate the clinical application value of humanized nursing mode in AMI through the implementation of humanized nursing mode for patients with AMI.

## 1. Materials and methods
### 1.1 Research object

109 patients with AMI admitted to our hospital from December 2017 to June 2019 were selected and randomly divided into CG and RG. There were 59 patients in RG, including 32 males and 27 females, with an average age of (65.2±3.8) years old. There were 50 cases in CG, including 29 males and 21 females, with an average age of (66.1±3.6) years old. Patients with hematological diseases, malignant tumors, mental disorders, severe liver and kidney dysfunction were excluded from the study. There was no significant difference between the two groups in the types of myocardial infarction and general data such as average age and gender ratio (P>0.05), which was comparable.

### 1.2 Nursing methods

CG: patients were treated with routine nursing intervention, including reception of being hospitalized for emergency call, disease observation, environmental care, medication guidance, etc.

RG: patients were treated with humanized nursing intervention. The specific method was to strengthen the communication with the patients, stabilize their unhealthy emotions, eliminate their anxiety, use respectful language and etiquette language for all nursing processes and contents of the patients and use polite language throughout the whole nursing process while carrying out emergency nursing rapidly. Secondly, nursing staff could intervene in the patient's inner world timely. Nursing staff could carefully observe the patient's emotional response, timely intervene in case of dysphoria, depression, inferiority complex and other adverse emotions, patiently listen to the patient's expression, one-on-one communicate with patients with a caring, enthusiastic and respectful attitude, appease their adverse emotions and make patients feel the care and respect of the people around them. Nursing staff could provide

necessary comfort to the patient's family members, tell them to keep calm and actively cooperate with the medical staff. Finally, the treatment plan and the possibility of cure were described to the patient so as to enhance the patients' confidence in receiving treatment. At the same time, a better treatment environment also played a key role in the patient's condition. Ward environment was kept clean and sanitary to make patients feel comfortable, improve the patients' unhealthy emotion significantly and provide the best quality service for patients.

### 1.3 Outcome measures

The successful rescue rate for AMI was compared statistically in the two groups. The rescue time and the score of close cooperation between doctors and nurses were analyzed (total of 100 points; the higher the score, the higher the level of close cooperation between doctors and nurses). The clinical nursing satisfaction rate of the family members was investigated and compared in the two groups. After nursing, the anxiety and depression levels of patients before and after

nursing were evaluated in the two groups by using self-rating anxiety scale and self-rating depression scale, and the complications of patients were observed in the two groups.

### 1.4 Statistical analysis

SPSS21.0 was used to process the data, and the measurement data were expressed as the mean±standard deviation of at least three independent experiments. T test was used for comparison between groups. The counting data was expressed as (n, %) % and tested by chi-square test. GraphPad Prism 6 statistical software was used to analyze and plot.

## 2 Results
### 2.1 Comparison of emergency rescue time, admission time and hospitalization time between the two groups

In terms of emergency rescue time, admission time and hospitalization time in the two groups, the patients in RG were obviously better than those in CG, and the time of each index was obviously shorter than that in CG (P<0.01).

*Table 1.* **Comparison of clinical conditions in the two groups**

|  | Emergency rescue time (min) | Admission time (h) | Hospitalization time (d) |
|---|---|---|---|
| CG (n=50) | 38.6±2.36 | 3.48±0.15 | 22.6±0.35 |
| RG (n=59) | 21.5±1.52 | 2.03±0.12 | 14.9±0.26 |
| $\chi^2$/t | 45.6178 | 56.0550 | 131.5380 |
| P | <0.0001 | <0.0001 | <0.0001 |

### 2.2 Score of close cooperation between doctors and nurses and successful rescue rate

By observing the score results of close cooperation between doctors and nurses, the score

indicating that the cooperation between doctors and nurses in RG was high. At the same time, the successful rescue rate in RG was significantly higher than that in CG (P<0.01).
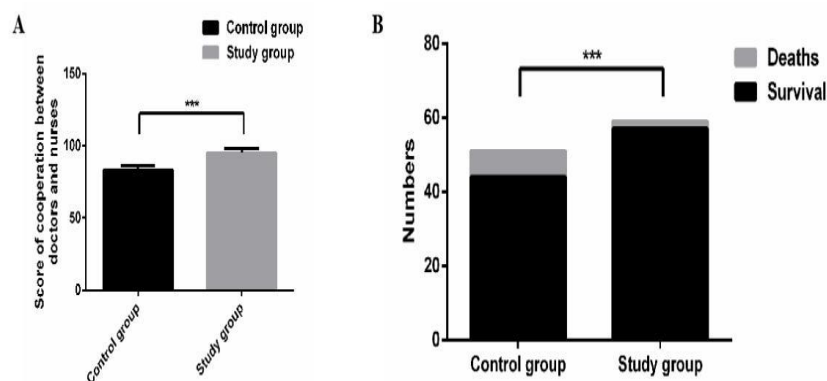


of RG was significantly higher than that of CG,

Figure 1. **Score of close cooperation between doctors and nurses and successful rescue rate in the two groups**

**2.3 Comparison of unhealthy emotion between the two groups before and after nursing**

By evaluating the improvement of anxiety and depression in the two groups before and after nursing, the results showed that there was no significant difference in anxiety and depression scores in the two groups before nursing. After nursing, the scores of the two indexes were reduced between the two groups, but the lowered range of the scores of patients in RG was significantly larger than that in CG (P<0.01).

*Table 2.* **SAS and SDS scores in the two groups before and after nursing**

|  | SAS score | | SDS score | |
|---|---|---|---|---|
|  | **Before nursing** | **After nursing** | **Before nursing** | **After nursing** |
| CG （n=50） | 54.6±5.26 | 48.2±3.92 | 47.6±4.63 | 42.3±3.69 |
| RG (n=59) | 54.3±5.13 | 34.3±2.06 | 46.2±4.26 | 35.3±2.65 |
| $\chi^2$/t | 0.3007 | 23.6649 | 1.6429 | 11.4917 |
| P | 0.7642 | <0.0001 | 0.1033 | <0.0001 |

**2.4 Complications of patients in the two groups**

The total incidence of complications was 15% in CG and 4.41% in RG. The RG was significantly lower than the CG (P<0.01).

*Table 3.* **Comparison of incidence of complications between the two groups**

|  | **Dyspnea** | **Arrhythmia** | **Hematuresis** | **Cardiogenic shock** | **Recurrent myocardial infarction** | **Overall incidence** |
|---|---|---|---|---|---|---|
| CG (n=50) | 1（2） | 3（6） | 2（4） | 1（2） | 2（4） | 9（15） |
| RG (n=59) | 1（1.69） | 1（1.69） | 0（0） | 0（0） | 1（1.69） | 3（5.07） |
| $\chi^2$/t |  |  |  |  |  | 4.6081 |
| P |  |  |  |  |  | 0.0318 |

**2.5 Nursing satisfaction**

There was a significant difference in nursing satisfaction between the two groups. The patients' satisfaction in RG was significantly higher than that in CG (P<0.01).

*Table 4.* **Comparison of patients' satisfaction between the two groups**

|  | **Dissatisfaction** | **Basically satisfaction** | **Very satisfied** | **Total rate of satisfaction (Basically satisfied+very satisfied)** |
|---|---|---|---|---|
| CG (n=50) | 11 | 20 | 19 | 39（78） |
| RG (n=59) | 2 | 26 | 31 | 57（96.6） |
| $\chi^2$/t |  |  |  | 9.1191 |
| P |  |  |  | 0.0025 |

**Discussion**

As AMI is a relatively serious disease in cardiovascular diseases, and this disease has the characteristics of rapid onset and rapid progress, this will lead to some patients with serious illness even have serious consequences of death. Therefore, it is very important for patients to take more effective nursing measures(Rehman et al.,2019). Especially in the process of patients' nursing, minimizing the time of each link can better improve the prognosis of patients. In particular, with the continuous improvement of people's requirements for quality of life and medical services, patients' requirements on nursing quality also increase, so the application of humanized service in nursing is the core of high-quality nursing(Patel et al.,2018). Humanized nursing for patients with AMI can save time better than traditional emergency nursing, greatly simplify nursing process, enhance rescue efficiency and effectively avoid serious consequences for patients. The results of this study showed that the patients receiving humanized nursing mode had obvious clinical advantages in terms of emergency rescue time, admission time and hospitalization time, and the duration of each index was significantly shorter than that in the conventional nursing group. At the same time, the score of cooperation between doctors and nurses in the humanized nursing group was significantly higher than that in the

conventional nursing group, and the successful rescue rate was also significantly increased. In the process of humanized nursing, it involves the clinical evaluation and monitoring of the patient's condition and psychological nursing. First-aid personnel shall promptly carry out scientific evaluation in combination with various known patient information, so as to do a better job in preparation for rescue and quickly carry out examination and targeted first aid for patients(Wu et al.,2015). Before nursing, there was no significant difference in unhealthy emotion scores between the two groups. After nursing, the unhealthy emotion scores of patients in humanized nursing group were significantly lower than those in conventional nursing group. Nurse-patient communication skills, as an important part of humanized nursing, directly affect the subjective emotional state of patients, which has an important influence on the improvement of illness and rehabilitation effect. Nurse-patient communication from the perspective of humanized nursing refers to the process of exchanging opinions, viewpoints and emotions between medical staff and patients and their relatives. Clinical psychology research shows that better nurse-patient communication skills are the basis for establishing better interpersonal relationships between nurses and patients and their families. In fact, the majority of patients also hope to establish better communication methods with nursing people(Harbishettar et al.,2019). Through the "high-quality nursing", "communication skills", "sense of responsibility" and other services embodying humanistic connotation of nursing staff, it can bring active and positive impact on the subjective psychology of patients in the psychological discomfort period after AMI, and improve the emotional state of patients, which is of fundamental significance to improve treatment compliance(Beltrán,2016). As AMI will bring great pain to patients, it will also lead to serious negative emotions, which will affect the compliance of patients. Humanized nursing can effectively alleviate the negative emotions of patients and enable patients to actively cooperate with treatment. The incidence of complications after treatment in humanized nursing group was significantly lower than that in conventional nursing group. The total satisfactory rate of patients receiving humanized nursing was significantly higher than that of the routine group. It showed that humanized nursing effectively avoided the occurrence of various complications, which could give patients more ideal treatment effect and prognosis of disease, and improve patients'

satisfaction with nursing services, and fundamentally improve their quality of life.

To sum up, humanized nursing mode has better clinical significance in AMI, which can reduce the unhealthy emotion, shorten the first-aid time and improve the successful rescue rate in patients with AMI, so it is worthy of exploration and promotion.

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