

Correlation between ICU Nurses' Humanistic Care Ability and Compassion Fatigue in Class III Grade A Hospitals in Xi'an

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Abstract: Compassion fatigue is an important problem affecting the physical and mental health of nurses and the quality of nursing work. To understand the status quo of compassion fatigue and humanistic care ability of ICU nurses and analyze the correlation between them is very important for ensuring the physical and mental health of nurses and improving the quality of nursing work. In this paper, from February 2023 to April 2023, a total of 197 ICU nurses from 9 Class iii Grade A hospitals in Xi'an were selected as the research objects by the convenient sampling method. The general information questionnaire, Compassion Fatigue Scale for Medical Staff, and Humanistic Care Ability Evaluation Scale were used to investigate them. The results showed that the score of compassion fatigue of ICU nurses was (103.80 ± 17.99) , which was at a medium level. The score of humanistic care ability was (191.24 ± 20.75) , which was at a low level. The total score of compassion fatigue was negatively correlated with the total score of humanistic care ability ($r = -0.568, P < 0.01$), and the total score of compassion fatigue was negatively correlated with the dimensions of cognition, courage, and patience ($r = -0.325, -0.509, \text{ and } -0.184$, respectively, all $P < 0.01$). Humanistic care ability scores and loss of mental tension, enthusiasm, behavior; negative, emotional indifference, ability to doubt, was found to be inversely associated with the loss of morale dimension (r , respectively $0.357, 0.390, 0.428, 0.262, 0.539, 0.477, P < 0.01$). This study highlights the interaction between compassion fatigue and humanistic care ability in ICU nurses. Nursing managers should pay attention to and take effective measures to reduce the level of compassion fatigue of ICU nurses in time to improve their humanistic care ability, and should also strengthen the humanistic care education and training of ICU nurses to improve their humanistic care ability to reduce the level of compassion fatigue.

Keywords: Intensive care unit; Nurses; Compassion fatigue; Humanistic care ability

1. Introduction

The term "compassion fatigue," coined by Joinson in 1992, describes the phenomena of physical and mental exhaustion that results from providing care for individuals who are ill or unfortunate. It can be characterized by emotional numbness, energy exhaustion, behavior retreat, and a loss of interest for one's work^[1]. It mainly occurs in pastors, counselors, nurses and other people engaged in helping occupations^[2]. The term "humanistic caring ability" describes a nurse's genuine capacity to provide patients with conscious and innovative care by upholding their morality, humanity, physical stamina, intelligence, knowledge, emotion, and volition as intrinsic attributes^[3-4]. In the closed working environment, facing a large number of critically ill patients, lasting emotional stress and high pressure nursing work, ICU nurses should not only provide routine nursing services for patients, but also provide positive emotional care for patients. Long-term emotional consumption promotes the formation of compassion fatigue in ICU nurses. Research has indicated that ICU nurses experience high levels of compassion fatigue^[5] and poor levels of humanistic care^[6], however it is still unclear how these two conditions are related. In order to provide a foundation for preserving the physical and mental health of ICU nurses and raising the quality of nursing, this study intends to investigate the current state of compassion fatigue and humanistic care ability of ICU nurses. It also seeks to further explore the relationship between compassion fatigue and humanistic care ability of ICU nurses.

2. Objects and Methods

2.1 Subjects

Convenience sampling was used to pick ICU nurses from nine Class iii Grade A hospitals in Xi'an as survey subjects between February and April of 2023. Inclusion criteria:①ICU registered nurses;② volunteer involvement in this study and informed consent. Criteria for exclusion:①refresher nurses, practice nursing students, unregistered nurses (standardized training nurses);② individuals who declined to answer the survey's questionnaire.

2.2 Methods

2.2.1 Research Tools

2.2.1.1 The general information questionnaire

Was designed by the researchers, including gender, age, highest education, marriage, professional title, type of work, ICU working years, personal monthly average pre-tax income, average monthly night shift, etc.

2.2.1.2 Compassion Fatigue Scale for medical staff

Was developed by Li Xiaoqin^[7], which is suitable for the measurement of compassion fatigue of medical staff in China. The scale has 36 items and 6 dimensions (mental strain, lack of excitement, bad behavior, apathy, ability doubt and loss of fighting spirit). Using the Likert 5 point scale, from "very do not agree" to "very agree" the score increased from 1 to 5 points. Higher total scores indicate higher levels of compassion fatigue; the range of scores is 36 to 180. 0.858 was the Cronbach's α coefficient.

2.2.1.3 Caring ability inventory (CAI)

Was compiled by Nkongho^[8] in 1990 and translated by Xu Juan et al.^[9] in 2008 to measure the humanistic care ability of others. The scale's Cronbach's α coefficient was 0.856. The three dimensions (cognition, courage, and patience) and 37 items made up the scale. Thirteen items were assessed in reverse on the Likert T7 scale, with the score increasing from 1 point to 7 points from entirely disagree to completely agree. The CAI's overall score varied from 37 to 259. Greater capacity for caring is indicated by a higher overall score.

2.2.2 Survey method

This study used questionnaire survey method. Electronic questionnaire was made on the Questionnaire Star platform. The two-dimensional code poster of the electronic questionnaire, along with the study purpose and fill-in instructions, were submitted to the work group of each hospital department for investigation with the agreement of the head of the nursing department at each hospital. This survey had 202 questionnaires in total; 5 invalid questionnaires were eliminated, leaving 197 valid questionnaires that were recovered, yielding an effective recovery percentage of 97.52%.

2.2.3 Statistical methods

Software version SPSS19.0 was utilized for statistical analysis. The general data of ICU nurses were reported by constituent ratio and frequency in a descriptive statistical analysis. ($\bar{x} \pm s$) described the current state of compassion fatigue and the humanistic care skills of ICU nurses. The relationship between ICU nurses' capacity for humanistic care and compassion fatigue was examined using Pearson correlation analysis. Statistics were deemed significant if $P < 0.05$.

3. Results

3.1 General information of ICU nurses

Among 197 ICU nurses, gender: 11 males (5.6%), 186 females (94.4%); Age: ≤ 25 years old 30 cases (15.2%), 26-35 years old 123 cases (62.4%), 36-45 years old 41 cases (20.8%), > 45 years old 3 cases (1.5%); 16 (8.1%) had junior college education, 181 (91.9%) had bachelor's degree or above. Matrimony: 82 (41.6%) were single, 5 (2.5%) were divorced or widowed, and 110 (55.8%) were married. Children: 96 (48.7%) had no children, 23 (11.7%) were infants and young children, 67 (34.0%) were school age, 9 (4.6%) were junior or senior high school, and 2 (1%) were college or above. There

were 38 (19.3%) nurses, 90 (45.7%) senior nurses, 59 (29.9%) nurse-in-charge, and 10 (5.1%) associate chief nurses or above. Types of work: 25 (12.7%) were full-time employees, 46 (23.4%) were personnel agents (appointment system), and 126 (64.0%) were contract workers (temporary workers). ICU working years: <1 year 40 (20.3%), 1-2 years 25 (12.7%), 3-5 years 30 (15.2%), 6-10 years 52 (26.4%), >10 years 50 (25.4%); Personal monthly average pre-tax income: 32 (16.2%) <4000 yuan, 101 (51.3%) 4000-6000 yuan, 42 (21.3%) 6000-8000 yuan, 22 (11.2%) >8000 yuan; The average number of night shifts per month was 50 (25.4%) for 0-4 shifts, 121 (61.4%) for 5-9 shifts, 23 (11.7%) for 10-14 shifts, and 3 (1.5%) for more than 15 shifts. The average number of daily nursing patients: 0-7 (3.6%), 1-3 125 (63.5%), 4-6 34 (17.3%), >6 31 (15.7%); Family support work: 140 (71.1%), 6 (3.0%), and 51 (25.9%) were unclear; Received humanistic care training: 119 (60.4%), no 78 (39.6%); 43 (21.8%), 28 (14.2%), 99 (50.3%), 14 (7.1%) and 13 (6.6%) concerned by their units.

3.2 Status quo of compassion fatigue of ICU nurses

The average score for each component was (2.88±0.50), and the overall compassion fatigue score for ICU nurses was (103.80±17.99). From high to low, the average score for each dimension was: The scores of emotional apathy, loss of enthusiasm, ability doubt, negative behavior, loss of fighting spirit and mental stress were (3.09±0.67), (3.01±0.62), (2.96±0.73), (2.88±0.65), (2.70±0.68) and (2.65±0.81), respectively. (See Table 1)

Table 1: Compassion fatigue score of ICU nurses ($\bar{x} \pm s, n = 197$)

Scale	The project	Number of items	Total score	Item mean score
The medical staff had compassion fatigue	Mental strain	6	15.92±4.87	2.65±0.81
	Loss of enthusiasm	6	18.06±3.69	3.01±0.62
	Negative behavior	6	17.29±3.87	2.88±0.65
	Apathy of feeling	6	18.55±4.02	3.09±0.67
	Doubt of ability	6	17.75±4.39	2.96±0.73
	Loss of morale	6	16.22±4.10	2.70±0.68
	Total score	36	103.80±17.99	2.88±0.50

3.3 The present state of ICU nurses' capacity to provide humanistic care

The ICU nurses' overall humanistic care ability score was (191.24±20.75), the average score of items was (5.17±0.56), and the scores of three dimensions were: The scores of patience, cognition and courage were (57.95±6.49), (78.49±10.20) and (54.80±14.30) respectively. (See Table 2)

Table 2: ICU nurses' humanistic care competency scores ($\bar{x} \pm s, n = 197$)

Scale	The project	Number of items	Total score	Item mean score
Evaluation of caring ability	Cognition	14	78.49±10.20	5.61±0.73
	Courage	13	54.80±14.30	4.22±1.10
	Patience	10	57.95±6.49	5.79±0.65
	Total score	37	191.24±20.75	5.17±0.56

3.4 Correlation between ICU nurses' compassion fatigue and capacity for humanistic care

The total score of humanistic care ability was negatively linked ($P \leq 0.01$) with the scores of each dimension of ICU nurses and the total score of compassion fatigue, according to the results of a Pearson correlation analysis. There was a negative correlation ($P < 0.01$) between the total score of compassion fatigue and the overall humanistic care ability score as well as the scores of each dimension. Refer to Table 3.

Table 3: Correlation between compassion fatigue and humanistic care ability of ICU nurses (r)

The project	cognition	Courage	Patience	Total score of humanistic care ability
Mental strain	-0.086	-0.436 ^a	-0.047	-0.357 ^a
Loss of enthusiasm	-0.289 ^a	-0.265 ^a	-0.208 ^a	-0.390 ^a
Negative behavior	-0.242 ^a	-0.407 ^a	-0.092	-0.428 ^a
Apathy of feeling	-0.261 ^a	-0.150 ^b	-0.097	-0.262 ^a
Doubt of ability	-0.255 ^a	-0.518 ^a	-0.181 ^b	-0.539 ^a
Loss of morale	-0.305 ^a	-0.390 ^a	-0.187 ^a	-0.477 ^a
Total compassion fatigue score	-0.325 ^a	-0.509 ^a	-0.184 ^a	-0.568 ^a

Note: ^b $P < 0.05$; ^a $P < 0.01$.

4. Discussion

4.1 Status quo of compassion fatigue of ICU nurses

According to the survey results, the overall score of compassion fatigue among ICU nurses was (103.80±17.99), falling into the medium range. This suggests that the ICU nurses in Class iii Grade A hospitals in Xi'an had a general level of compassion tiredness. According to Zhou Huifang et al.^[10], the survey results on ICU nurses in five Taiyuan tertiary hospitals are in line with those of the study. The nursing work of ICU is diverse and fine, from advanced life support to basic physical care. Due to the particularity of ICU, family members cannot come in to accompany them, and the patients in ICU are all critically ill patients, which makes ICU nurses have to play a variety of roles at the same time, not only the guardian of patients' life, but also provide direct treatment and nursing services for patients. It is also a spiritual healer to meet the emotional support and psychological needs of patients. Long-term exposure to patients' traumatic stress leads to emotional tension, anxiety and fear in nurses, and long-term excessive emotional expenditure leads to compassion fatigue in nurses^[11]. Among them, the highest average scores of all dimensions were loss of enthusiasm and emotional apathy, which were more than 3 points, and were (3.01±0.62) points and (3.09±0.67) points, respectively. The analysis may be due to:①ICU nurses are exposed to high intensity, high pressure closed and tense working environment for a long time, facing great physiological and psychological impact, long-term care of critically ill patients, may have to rescue patients at any time, often may have to bear the failure of rescue patients with a sense of helplessness and helplessness, gradually wear off the work enthusiasm, leading to emotional apathy.②Compared with general departments, ICU nurses need to pay more love, patience and compassion in their work, and provide positive physiological treatment and psychological and emotional support for patients for a long time, leading to loss of enthusiasm.③ICU patients have complex and critical conditions, many complications, difficult treatment, high mortality, and most of the patients can not take care of themselves. The basic nursing and monitoring equipment are large, so that ICU nurses have heavy workload and high occupational pressure.④ICU nurses often face dying patients, but lack of hospice care education and emotional education training for ICU nurses. In addition to negatively impacting nurses' physical and emotional well-being and their sense of professional identity and job quality, compassion fatigue also lowers nurses' work excitement and raises turnover rates^[12,13]. As a result, it is advised that management monitor the state of compassion fatigue among ICU nurses and implement efficient preventative and corrective actions. Managers should regularly screen and assess the compassion fatigue of ICU nurses and intervene in time. Regular education and training including dying and death coping ability, emotional regulation, self-care and nurse-patient communication were carried out. Relevant hospital departments should provide ICU nurses professional psychological counseling services regularly and organize emotional regulation exercises, such as Balint group^[14], mindfulness intervention^[15] and other activities. Managers should guide the nurses effectively regulate and improve empathy force and work enthusiasm. Hospital should increase ICU nurse manpower allocation and improve ICU nurse salary treatment, and management shall allocate nurses work and rest time, strengthen the humanistic care of ICU nurses, so as to improve their job satisfaction and professional sense of worth, lighten the compassion fatigue level, improving the quality of nursing service.

4.2 Current state of ICU nurses' humanistic caregiving skills

The study's findings demonstrated that ICU nurses in Class iii Grade A hospitals in Xi'an had a low overall care ability score of (191.24±20.75) for humanistic care, which was in line with the findings of previous investigations in the literature^[16-17]. It may be related to the closed environment, intense working atmosphere and heavy rescue and treatment tasks in ICU, which makes nurses focus on completing rescue and treatment and observing various instrument alarms. Moreover, most ICU patients are in critical condition and cannot take care of themselves, and everything depends on nurses, so that nurses do not have much time and energy to care for the spiritual needs of patients^[18]. At the same time, most ICU patients have consciousness and perception disorders, which affects the implementation of nurse-patient communication and humanistic care. Furthermore, the development of humanistic care skills is not given enough attention in Chinese nursing education, which has not produced a fully developed humanistic education system, an inadequate humanistic care curriculum^[19], and a dearth of humanistic care practice training^[20]. All of these factors contribute to the lack of awareness, knowledge, and practical skills in humanistic care among nurses. It indicates that in order to increase nurses' awareness of and capacity for providing humanistic care, hospitals and schools should prioritize and enhance their humanistic care education and training programs. At the same time, the

survey result was higher than the survey result (184.65 ± 23.65) of 1567 nursing undergraduates by Su Han et al.^[21]. The explanation could be that while nursing students in schools are primarily taught theoretical subjects, lack clinical practice training, and are exposed to the AIDS model, they are unable to engage in effective nurse-patient communication, which hinders their ability to provide better care for patients. In contrast, hospital nurses have extensive clinical work experience and can provide patients with more emotional support. Furthermore, the survey's results indicated that cognition—which is defined as comprehending oneself, others, and one's surroundings—had the highest score, coming in at 78.49 ± 10.20 . It is suggested that patients in this group have better cognition of themselves, others and the surrounding environment, and can give more care and support to patients. In recent years, the state has strengthened the advocacy and intervention of humanistic care for nurses, schools have actively carried out humanistic nursing education courses, and hospitals have paid attention to and strengthened the education and training of humanistic care related knowledge and skills for nurses, which has gradually improved the nurses' humanistic care cognitive level. Among all dimensions, the dimension of courage scored the lowest (54.80 ± 14.30), which was consistent with the survey results of Chen Shaoru^[22]. The courage dimension measures the ability of nurses to take the initiative to care for themselves and others and deal with emergency and unknown situations^[23]. The reason may be the current tense medical environment and many medical disputes, and ICU nursing work has great responsibility, high risk, and is full of all kinds of uncertainty. Therefore, care needs to have courage, courage is based on the spirit of adventure, and constantly put care into practice. However, the current humanistic care education in our country is mostly theoretical knowledge teaching, lacking humanistic practice training, which is not conducive to cultivating caring courage. In addition, most of the respondents in this study are young female nurses. Compared with men, women lack the courage to take the initiative to implement behavior and subjective active intervention to others^[24], and young nurses lack the clinical work experience to deal with various emergencies by themselves. ICU nurses should therefore get systematic, standardized, and customized humanistic care training. In particular, it is necessary to strengthen the cultivation of courage in practice, exercise their enthusiasm and initiative, and improve their emergency response ability, interpersonal communication ability and psychological nursing ability.

4.3 An analysis of the relationship between ICU nurses' capacity for humanistic care and compassion fatigue

The study's findings demonstrated a negative correlation ($P < 0.01$) between the ICU nurses' overall compassion fatigue score and the scores of all compassion fatigue-related characteristics and their overall humanistic care competence score. There was a negative correlation ($P < 0.01$) between the total score of compassion fatigue and the overall humanistic care ability score as well as the scores of each dimension. The findings demonstrated that ICU nurses' capacity for providing humanistic care increased with decreasing levels of both physical and mental tiredness and compassion fatigue. Conversely, the less compassion fatigue an ICU nurse has, the higher their humanistic care competence. The two interact and influence each other. The following negative correlations were found between the dimensions: mental tension was negatively correlated with the courage dimension; loss of enthusiasm was negatively correlated with the cognition, courage and patience dimension; negative behavior was negatively correlated with the cognition and courage dimension; Emotional apathy was negatively correlated with cognition and courage dimensions; ability doubt was negatively correlated with the dimensions of cognition, courage and patience; and loss of fighting spirit was negatively correlated with the cognition, courage and patience dimension. $P < 0.01$ or $P < 0.05$, for all. Humanistic care ability and all aspects of compassion fatigue in ICU nurses were found to be negatively associated, suggesting that nurses who experience less compassion fatigue also possess great humanistic care abilities. If nurses have a positive and optimistic healthy mental state, and effectively self-regulate the physiological and psychological pressure and negative emotions in time, it will help to relieve compassion fatigue, improve professional identity and empathy ability, and make nurses have higher work enthusiasm and work spirit, be more active in nursing work, and be more loving, patient and compassionate to patients. The enthusiastic emotional care is transmitted to the patient, thus showing a higher caring ability. On the other hand, compassion fatigue decreases with increasing humanistic care competency among nurses. It indicates that improving nurses' humanistic care ability is helpful to alleviate compassion fatigue. This may be related to the fact that nurses with higher humanistic care ability have rich clinical work experience, solid humanistic care knowledge reserve, good interpersonal communication skills and correct professional values. They can establish a harmonious nurse-patient relationship, identify the psychological demands of patients in time, provide high-quality humanistic care nursing services, obtain the recognition of patients, and meet the sense of achievement and value

of nurses. Thus, compassion fatigue is avoided. Consequently, it is recommended that managers focus on the effects of compassion fatigue on the physical and mental health of ICU nurses, early prevention, routine screening, prompt intervention, teaching nurses to put their own needs before those of others, cultivating a positive outlook, supporting and assisting nurses in adopting healthy coping mechanisms when faced with challenges, and enhancing their mental well-being. Positive coping style can reduce the incidence of compassion fatigue in nurses^[25]. To lessen the level of compassion fatigue experienced by ICU nurses, various interventions such as psychological health education lectures, psychological stress training, capacity training, guidance on stress management techniques, etc. Nursing managers, on the other hand, should also be aware of the humanistic care capacity of intensive care unit (ICU) nurses. To enhance this capacity, they should routinely offer various training programs related to humanistic care, including lectures, interpersonal communication skills training, learning about correct professional values, and theoretical and practical knowledge.

5. Conclusions

In summary, there is a general degree of compassion fatigue and a low level of humanistic care skill among ICU nurses in Class iii Grade A hospitals in Xi'an. Compassion fatigue is negatively correlated with ICU nurses' capacity to provide humanistic care, and the two are influenced by one another. Nursing managers should thus be aware of, promptly avoid, and address the issue of ICU nurses experiencing compassion fatigue in order to lower the severity of the condition and enhance the nurses' capacity to provide humanistic care. Nursing managers should also focus on and enhance the education and training of ICU nurses in humanistic care-related knowledge and skills, as this will help them provide better humanistic care and lessen compassion fatigue. In the end, this will help to improve the mental health of ICU nurses and the standard of nursing care.

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